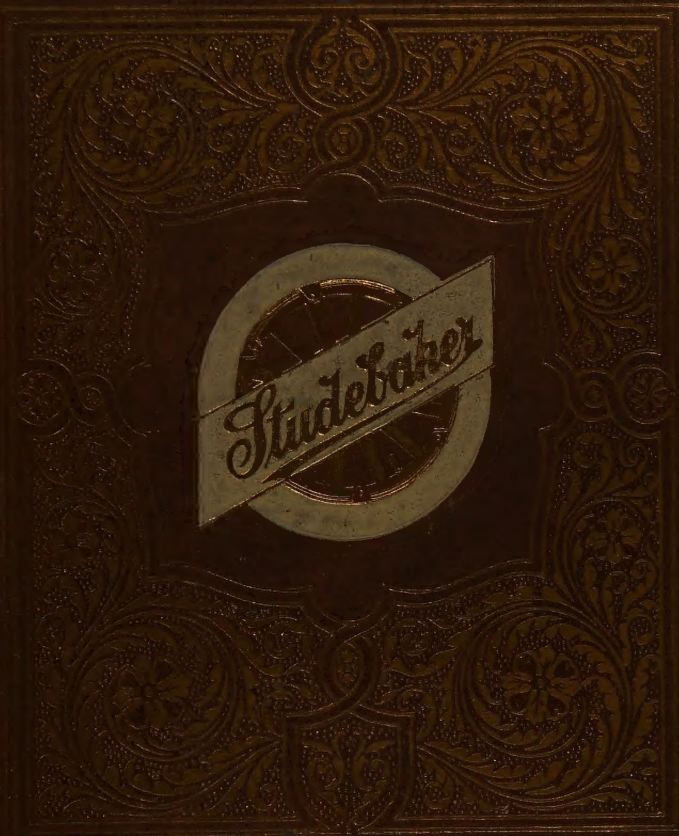


# HISTORY OF THE STUDEBAKER CORPORATION



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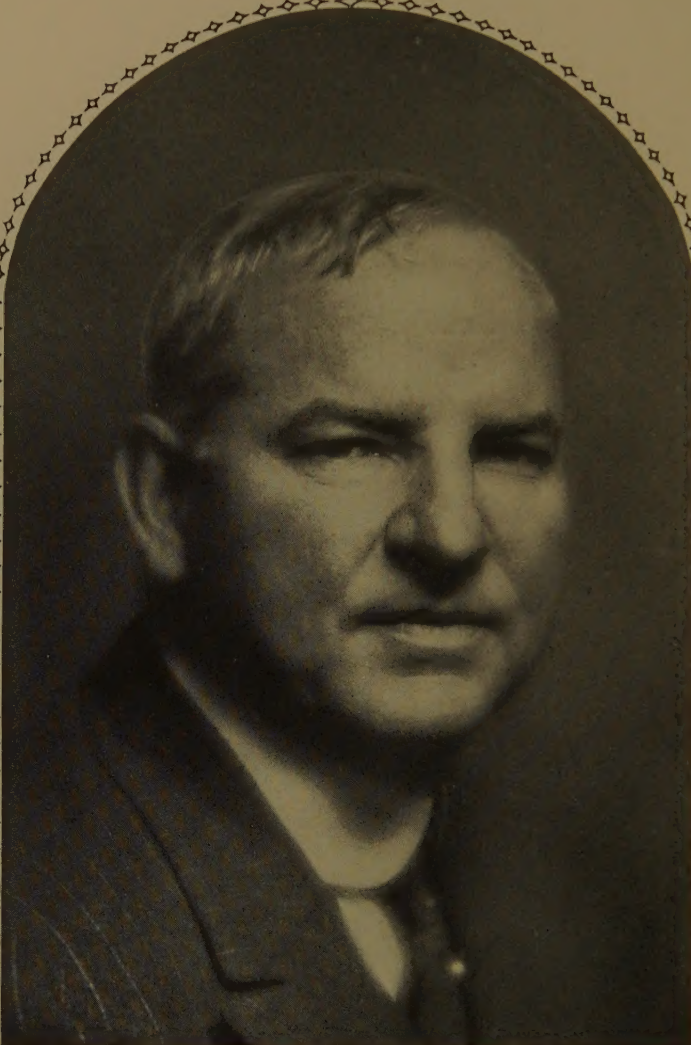
HISTORY OF  
THE STUDEBAKER  
CORPORATION

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ALBERT RUSSEL ERSKINE  
PRESIDENT  
THE STUDEBAKER  
CORPORATION

HISTORY  
OF  
THE STUDEBAKER  
CORPORATION

BY  
ALBERT RUSSEL ERSKINE



THE STUDEBAKER  
CORPORATION

1924

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1924

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*To the Memory of My Friend*

JOHN MOHLER STUDEBAKER







## PREFACE

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**T**HIS book is an amplified second edition of a history written in February, 1918, for the information of the stockholders, dealers, employees and numberless friends of the corporation. Thirty thousand copies of the first edition were printed and distributed, and the undertaking was considered a closed incident. Numerous requests for additional copies received constantly during the past few years are the justification for this second edition.

The Studebaker brothers, and their father before them, were blacksmiths, woodworkers, and wagonmakers by trade. Stretching over a period of two generations, they developed and expanded the Studebaker horse-drawn vehicle business until it reached world-wide proportions. Frugality, industry, self-denial, and honesty characterized their lives and built the foundation upon which the trade name Studebaker rests today so securely. No trade name in American industry enjoys a better reputation. These men are dead, but their spirit lives in the present management. The corporation has developed into a national institution, and hence it is bigger

## PREFACE

---

*than any man. It will continue to flourish throughout future years as different men come and go, because sound principles are observed in the conduct of the business. These principles are expressed in the advertising of the corporation, as follows:*

*The name "Studebaker" is a household word. The broad principle upon which Studebaker business is conducted, and upon which it has prospered for seventy-two years, now grounded upon tradition, insures satisfaction to everybody who deals with the House of Studebaker.*

A. R. E.

*South Bend, Indiana,  
March 5, 1924*



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# THE STUDEBAKER CORPORATION

GENERAL OFFICES: SOUTH BEND, INDIANA  
*Works: South Bend, Indiana; Detroit, Michigan, and Walkerville, Ontario*



## *Directors*

H. A. BIGGS	N. R. FELTES	ARTHUR LEHMAN
C. L. BOCKUS	F. STUDEBAKER FISH	HERBERT H. LEHMAN
WADDILL CATCHINGS	FREDERICK S. FISH	A. B. THIELENS
FREDERICK P. DELAFIELD	HENRY GOLDMAN	J. M. STUDEBAKER, JR.
A. R. ERSKINE	IRA C. JONES	M. F. WOLLERING

## *Executive Committee*

H. A. BIGGS	FREDERICK P. DELAFIELD	FREDERICK S. FISH
WADDILL CATCHINGS	A. R. ERSKINE	ARTHUR LEHMAN
	J. M. STUDEBAKER, JR.	

## *Finance Committee*

H. A. BIGGS	A. R. ERSKINE	N. R. FELTES
FREDERICK S. FISH	M. F. WOLLERING	

## *Officers*

FREDERICK S. FISH, <i>Chairman of Board</i>	W. P. SHILLINGTON, <i>Assistant Treasurer</i>
A. R. ERSKINE, <i>President</i>	GEO. A. FULMER, <i>Assistant Treasurer</i>
M. F. WOLLERING, <i>Vice President</i>	J. M. PETERSON, <i>Assistant Treasurer</i>
H. A. BIGGS, <i>Vice President</i>	J. C. BAYLESS, <i>Assistant Treasurer</i>
N. R. FELTES, <i>Treasurer</i>	FRED WOODWARD, <i>Assistant Secretary</i>
H. E. DALTON, <i>General Auditor</i>	
A. G. RUMPF, <i>Secretary &amp; Assistant Treasurer</i>	



Hawkins, Delafield and Longfellow, New York . . . .	<i>Counsel</i>
Touche, Niven & Co., New York and Chicago . . . .	<i>Auditors</i>
Lawyers Title & Trust Co., New York . . . .	<i>Transfer Agent</i>
Irving Bank—Columbia Trust Co., New York . . . .	<i>Registrar</i>
First Trust & Savings Bank, Chicago . . . .	<i>Transfer Agent</i>
Harris Trust & Savings Bank, Chicago . . . .	<i>Registrar</i>





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# INTRODUCTION

BY CHARLES A. LIPPINCOTT

---

IN THE year 1920 a great meeting was held in South Bend to celebrate the completion of the first LIGHT-SIX car produced by the new Studebaker plant. On that occasion the Reverend Doctor John Cavanaugh, C. S. C., formerly president of the University of Notre Dame, delivered a noteworthy address on the Romance of Big Business. The author has embodied in the following pages a remarkable illustration of the Romance of Big Business. The details have been selected with careful discrimination from a mass of available facts and organized into an illustration which informs the mind and stimulates the imagination.

All the elements of a great and inspiring story are here, from the humble beginnings and searching ordeals of the young pioneers to the vast achievements of matured minds enriched and enlightened by the costly wisdom of experience.

The reader will regret that the purpose of this narrative did not permit of a greater elaboration of some parts of the story. Buried under facts and figures there is a story of hopes and plans, of failures and successes, of crucial experiences

thrilling with human interest, but there is revealed enough to show the sturdy manhood, sterling character, and steadfast purpose of the men who wrought the great romance. It is a story of American manhood at its best, typical of the integrity, industry, courage, vision and perseverance upon which the big business of our country has been built.

It will be evident even to the casual reader of this narrative that the author was inspired by a spirit of admiration and veneration for the men who laid the foundations, and of devotion to the men who carried up the superstructure of the organization. But there is no hint in it of the supremely important contribution which he made to the result.

Albert Russel Erskine, President of The Studebaker Corporation, was born in Huntsville, Alabama, January 24, 1871. He is descended from a line of pioneer American Anglo-Saxon ancestors; his grandfather, Dr. Alexander Erskine, and his great-grandfather, Albert Russel, a colonel in the Revolutionary army, having been among the earliest settlers in Huntsville. He is a member of the Indiana Society of the Sons of the American Revolution.

He attended public and private schools until he was sixteen years of age. Then he went to work as an office boy in a railroad office at \$15 per month. At twenty-one, he was bookkeeper in a wholesale paper house at a salary of \$65 per month. In 1892 he obtained a position as bookkeeper with a wholesale drug house, and after three continuous years with this concern, he secured his first increase in salary by proposing that he be permitted to do the work

of two men. At the age of twenty-seven he was offered and accepted a position with the American Cotton Company as chief clerk at its St. Louis office. Afterwards, in 1900, he proceeded to its New York office as general auditor and manager of the operating department, supervising three hundred cotton gins in the South.

From 1904 to 1910 he was treasurer and a member of the board of directors of the Yale & Towne Manufacturing Company. During this period he received a certified public accountant's certificate from the State of Connecticut. Following this he was a year with the Underwood Typewriter Company as vice-president and one of the directors. He came to Studebaker in 1911 as treasurer and a member of the executive committee. In 1913 he was made first vice-president of the organization, and in 1915, president of the corporation, a position which he has filled with distinction to the present time.

His coming to the corporation in 1911 marked the beginning of a new era in its history. He brought to it the genius of organization, the vision of the future and the courage of leadership, so essential to the development and conduct of great enterprises. His passion for facts, his sound judgment of men and events, his tireless industry and intrepid manhood are the sources from whence came the inspiration and energy that have placed The Studebaker Corporation in the van of the world's great industries.

The progress of Studebaker under his direction has attracted wide attention. In 1921 the automobile business as

a whole went back 45 per cent, Studebaker went ahead 29 per cent, and many manufacturers, financiers and journalists were eager to learn the secret of this remarkable success. They found it in the keen foresight, analytical mind and vigorous will of the man who stood at the helm, for there is nothing connected with industry which his active intellect has not explored and appropriated to its own uses.

It would be a serious mistake, however, to think of Mr. Erskine as merely an organizer of a great industry. He is primarily a broad, generous-minded man. It is his ruling desire that every man associated with him should share liberally in all of his successes. It was this spirit that instituted the corporation's profit-sharing plan for all executives, and the co-operative plans, including dividends on wages, vacations with pay, insurance, pensions and stock purchase provisions for all employees.

At the very first intimation of war his genuine patriotism prompted him to offer to President Wilson the entire resources of The Studebaker Corporation. This offer was quickly accepted and fully redeemed at great cost, but it will always stand out as one of the noblest passages in the history of industry, and remain as an invaluable testimony to the unselfish service of American business men.

Mr. Erskine finds time, because he has the will, to devote to the service of the city, state and nation. He served for three years on the board of the Federal Reserve Bank of Chicago. He was a member of the Interstate Harbor Commission, appointed under an act of the legislatures of

Indiana and Illinois, which rendered a valuable report on the harbors and waterways at the southern end of Lake Michigan. Fifty thousand dollars was appropriated for the work of this commission, of which less than one thousand dollars was spent.

He was behind every effort organized by the city and state to assist in the prosecution of the war. He has shown his interest in beautifying the city by serving on the City Planning Commission. He has acted as chairman of campaigns to raise building funds for the city hospitals, the Y. M. C. A., and the University of Notre Dame.

He is recognized as South Bend's foremost citizen. In January, 1919, his fellow citizens invited him to be their guest of honor at the Oliver Hotel. Every interest of the city and county was officially represented at one of the largest and most enthusiastic meetings ever held in the community. Again, in June, 1921, his fellow citizens invited him to be their honored guest at a banquet made notable by the presence of many distinguished men, who came from a distance to manifest their appreciation of his character and work. The Right Reverend John Hazen White, bishop of the Northern Diocese of the Episcopal Church of Indiana, presided at the meeting. Addresses were made by Mr. Charles M. Schwab, by the Governor of Indiana, Mr. Waddill Catchings of New York, Mr. Walter C. Allen, President of the Yale & Towne Manufacturing Company, Dr. John Cavanaugh, C. S. C., Mr. Frank E. Hering and others. An elegant souvenir program, containing a brief biographical

sketch of Mr. Erskine, was provided for the guests. On this occasion his fellow citizens presented him with a set of old Georgian Silver, consisting of a centerpiece, weight 400 oz., from the collection of the Duke of Hamilton; four three-light candelabra, weight 620 oz., from the collection of the Duchess of St. Albans; eighteen plates, weight 380 oz., and four platters, weight 270 oz., from the collection of the Duke of Norfolk.

In 1921 the University of Notre Dame, the leading Catholic educational institution of the country, elected him president of its Board of Lay Trustees, a position which he still fills to the great advantage of the University.

In 1922 he presented to South Bend one hundred and twenty acres of valuable land from his large estate adjoining the city to be used as a park. The Mayor in acknowledging this splendid donation, at a dinner given to Mr. Erskine by the common council and city officials, stated that it was the first large gift that had been made to the city. Among his many donations to public and private benevolences, mention should be made of a gift of land for the extension of the cemetery in his native town, Huntsville, Alabama, and the erection of a beautiful gate to the memory of his mother.

His services to South Bend and the country have not been confined to manufacturing activities. As a man and citizen he is vitally interested in everything human, in all civic, state and national affairs. His broad vision, his comprehensive knowledge, his practical sense, his just mind and gen-



## INTRODUCTION

---

erous heart make him a wise counselor and an invaluable friend.

His associates, past and present, whose work he has so generously appraised in the following narrative, if the opportunity were given, would join whole-heartedly and unanimously in ascribing the success of their joint efforts to his intelligent and sympathetic direction. As an executive, as a citizen, and as a man he has justly earned, and is freely accorded, the respect, the confidence and the love of his associates, assistants and fellow citizens.

*C. A. Lippincott*





PART I

THE EARLIER PERIOD

---





## Chapter 1

### *The Studebaker Brothers*



THE ancestors of the Studebaker family first arrived in America at the port of Philadelphia on September 1, 1736, on the ship *Harle* from Rotterdam, Holland, as shown by the original manuscripts now in the Pennsylvania State Library at Harrisburg, and included Peter, Clement, Henry, Anna Margetha, and Anna Catherine Studebaker. The tax list of what was then Huntingdon Township, York County, showed among the taxpayers Peter Studebaker, Sr., and Peter Studebaker, Jr., blacksmiths and woodworkers.

The father of the Studebaker brothers, John Studebaker, was the son of Peter Studebaker, Jr. He lived in Adams County near Gettysburg, Pennsylvania, where in 1830 he bought property upon which he erected a brick house and a shop in which he pursued his trade as a blacksmith and wagon maker, and enjoyed a reputation as a conscientious and skillful workman. About 1835, considerable emigration occurred to Ohio and the adjoining states. John



REBECCA MOHLER STUDEBAKER, 1802-1887



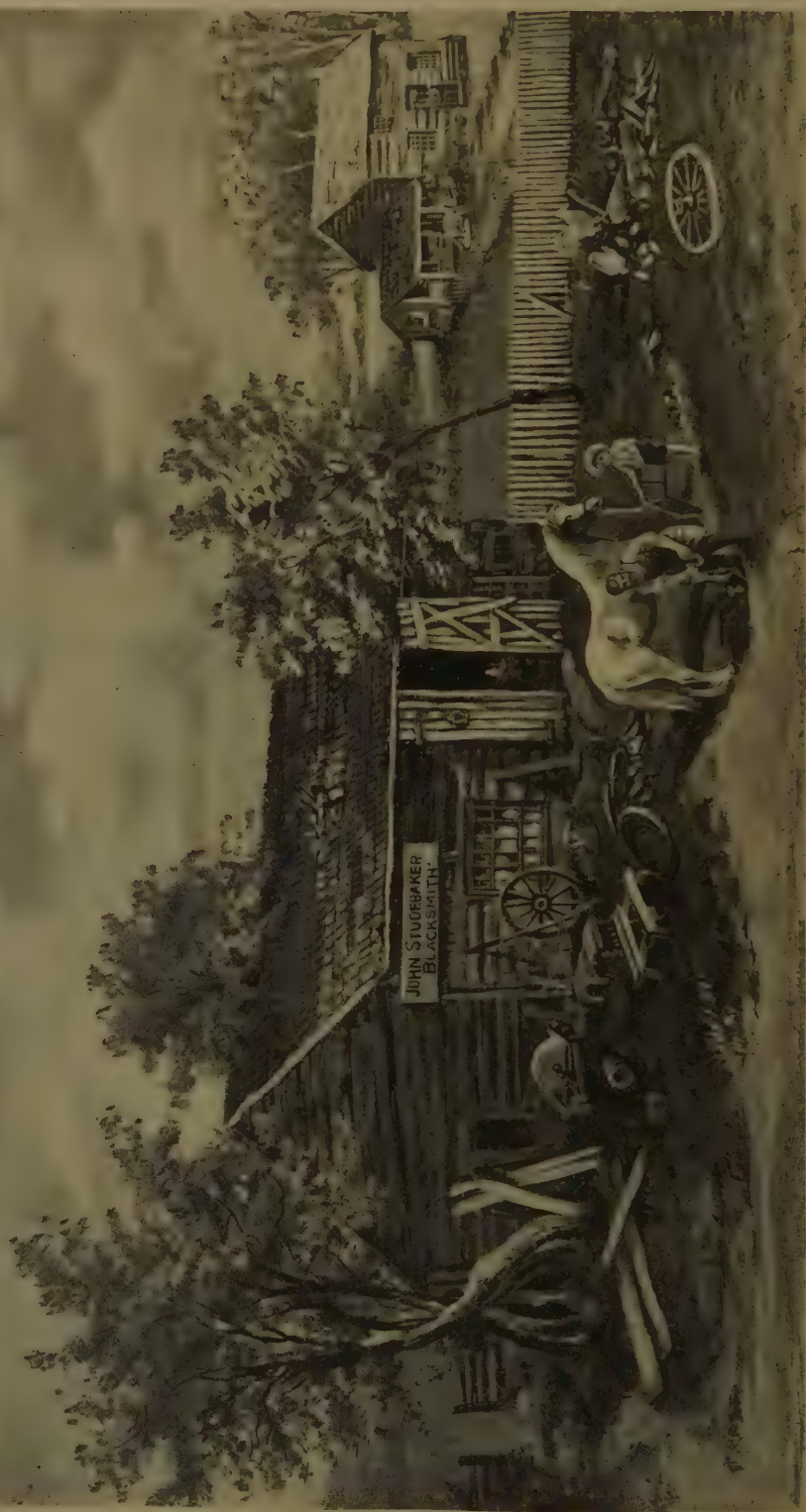
JOHN STUDEBAKER, 1799-1877



THE COVERED WAGON BUILT BY JOHN STUDEBAKER, 1830



Studebaker became affected with the western fever, and resolved to sell out, "go west," and grow up with the country. He built a "covered wagon" of the Conestoga pattern, the bed or box of which had an enormous carrying capacity. The top bows bent forward and backward respectively, and were covered with waterproof duck cloth. Wagons of this character may still be seen in old time pictures, and a few are preserved as relics of a bygone generation. They were used in the pioneer days, before other means of transportation came into vogue, for hauling farm products to cities and bringing merchandise on return. The turnpikes had long trains of these wagons frequently en route. Some wagons belonged to those who made a business of transporting merchandise, while others belonged to farmers who hauled their own. Four strong horses drew the Conestoga wagon which contained the family, consisting of the father, John, his wife, Rebecca Mohler, whom he had married in 1820, and six children, two of whom were the boys, Henry and Clem. Two other wagons were loaded with anvil, tools, utensils, and household goods. Their destination was Ashland, Ohio, where John Studebaker purchased property and built a house and shop, above the door of which was the legend, "Owe no man anything, but to love one another." At Ashland, three other sons were born, John Mohler, Peter Everst, and Jacob Franklin, and one daughter, Maria, who still lives in South Bend, the sole survivor of the family. Thus the family, equally divided, embraced ten children. While the



STUDEBAKER SHOP AND HOME, ASHLAND, OHIO, 1835

father was toiling at the forge, his good wife was running the spinning wheel, cheerful and happy in thus providing for her family, fabrics which in that day of hand-made industry, were in almost universal use. John Studebaker built numbers of wagons, including covered wagons of the Conestoga pattern, one of which, built in 1830, is now a prized relic in the Studebaker Museum at South Bend, where many old vehicles and automobiles are on display. His sons, the five brothers, were put to work early in the shop and in the fields. When the older boys became of age, their father urged upon them the importance of getting an independent start in life. Accordingly, about 1850, Henry and Clem departed from home and went overland to South Bend, Indiana, where Clem taught school for a time and worked at blacksmithing for 50c a day. John M., the third brother, soon followed them, while Peter E. became a merchant at Goshen, Indiana, and Jacob F. later removed to South Bend. The sons ultimately brought their parents and their sisters to South Bend, where the father died in 1877 and the mother in 1887.

Henry, aged 26, and Clem, aged 21, established the firm of H. & C. Studebaker, blacksmiths and wagon builders, in 1852, with a capital of \$68 and two forges. J. M., aged 19, had joined them with the intention of working at the trade, but he possessed the venturesome spirit of the pioneer, and as gold had been discovered in California and thousands of daring men were rushing out there to Eldorado in quest of wealth, he determined to try his fortune.





HENRY STUDEBAKER  
1826-1895



CLEMENT STUDEBAKER  
1831-1901



JOHN MOHLER STUDEBAKER, 1833-1917



PETER EVERST STUDEBAKER  
1836-1897



JACOB FRANKLIN STUDEBAKER  
1844-1887

THE FIVE STUDEBAKER BROTHERS

Accordingly, he and his brothers built a sturdy "covered wagon" which he traded to a wagon train for his passage and board. This wagon was one of the train which made the journey in good condition and arrived at old Hangtown, California (now Placerville), five months later. He arrived in 1853, and in 1912, he returned to Placerville and gave a reunion dinner to the old settlers and friends of his youth, to whom he recounted his early experience in graphic words, filled with philosophy. He said:

We were more than five months on the road, and landed right here on this square in August, 1853, and I had but fifty cents in my pocket. Although that was my only earthly possession, my spirit was not daunted, for we were all led to believe that all we had to do was to go out on the morrow and dig all the gold that our heart could desire. Of course, a big crowd gathered around us, and while we were trying to get them to talk about the gold mines, they insisted on asking questions about what had happened in the States since they had heard from their friends. While the hubbub was going on, a man came up and asked if there was a wagonmaker in the crowd of new arrivals. They pointed me out, and he asked, "Are you a wagonmaker?" "Yes sir," I answered, as big as life, with my fifty-cent piece in my pocket. He offered me a job in his shop, and I replied, "I came to California to mine for gold." After he had gone, a man stepped up very politely and said, "Will you let me give you a little advice, young man?" and upon my replying in the affirmative, continued, "Take that job and take it quick." His manner impressed me. He said that there would be plenty of time to dig gold, it wasn't always a sure thing, and that the job just offered me was a mighty fine chance for a stranger. I was impressed, and decided to go to work for the wagonmaker. He wanted me to make wheelbarrows for the miners, and arranged to pay me ten dollars each for my work. The tools were poor, and material only pitch pine lumber. I stuck to the job, made many wheelbarrows, and put my money in the bank. I soon found that hundreds and thousands of the pioneers who tried the mines never made a cent, but those who stuck to steady jobs at good wages

and saved their money were doing well. We worked many a night all night, frequently making miners' picks and repairing stage coaches, which came in late, and had to get out at six o'clock in the morning.

Meantime, back in South Bend, his brothers were in need of capital to finance their business. They had few tools, bought their material as needed from a local hardware store, and often traded their wagons for live stock or crops, or took notes in payment. Money was scarce and seldom obtained for sales. They appealed to J. M. to come back to South Bend and join them in business. Consequently, after five years of hard work in California, he yielded to their suggestions and took passage on a sailing ship for New York, via the Isthmus of Panama, with \$8,000 in gold nuggets he had earned sewed in a leather belt and strapped around his waist. Upon arrival at South Bend, he invested his money in the business and bought out the interest of his brother Henry, who preferring a rural life, decided to retire and become a farmer. This new money rehabilitated the firm of H. & C. Studebaker and assured its future prosperity.

J. M. Studebaker was in charge of the manufacturing department for forty-five years, during which time he personally supervised the building of nearly all vehicles that left the factory. He built into these products his sturdy, honest character, and thereby established a worldwide confidence in Studebaker vehicles. He was a master builder. Upon the death of Clem, he succeeded to the presidency, but continued to devote himself to the manufacturing depart-



ment with the intensity and determination of purpose that was his chief characteristic. After a life of incessant industry and hard application, this philosopher and friend of man, crowned with worldly success and held in high esteem, the last of the five brothers, died at South Bend March 16, 1917, aged eighty-three years.

Mr. Studebaker was the first President of The Studebaker Corporation. He afterwards became Chairman of the Board, and in 1915, the position of Honorary President was created by the directors especially for him, and was held by him at the time of his death.

Carrying out a project he had in contemplation at the time of his death, his daughter, Grace Studebaker Fish, and his son-in-law, Frederick S. Fish, erected to his memory in 1923 the Sunnyside Presbyterian Church, a splendid modern structure, and presented it to the congregation.

Clem Studebaker, President of the company thirty-three years, was a public-spirited, high-minded man of democratic disposition, honored in his home town and by the nation. In 1897, a reunion of former residents at Ashland, Ohio, was attended by 10,000 people, among whom were the three surviving Studebaker brothers, it being their first visit since their removal nearly fifty years before. Clem was the spokesman for the family, and read a most interesting paper, reciting an unvarnished story of the early ups and downs of the family, its struggles and triumphs, and the poverty which had encompassed all. Seldom was told a more pathetic and realistic tale of the struggles of a



ST. PAUL'S METHODIST EPISCOPAL CHURCH



SUNNYSIDE PRESBYTERIAN CHURCH



Y. M. C. A., SOUTH BEND, INDIANA

pioneer family. His death, in 1901, at the age of seventy, was mourned by numberless friends throughout the land. A splendid memorial, the St. Paul's Methodist Church, erected to his memory by his widow, adorns the city of South Bend, where he lived for fifty years.

Peter E., the fourth brother, who had been a merchant in Goshen, Ind., shortly afterwards cast his lot with the firm and became an important factor in its management. He was put in charge of sales, and opened up branch houses as sales expanded. The first was in 1870 at St. Joseph, Mo., to handle the business of the pioneers whose wagon trains and expeditions to the far West were crossing the country in large numbers.

Peter E., a man of strong personality, affable and popular, was known throughout the country. Like his brothers, he never forgot the early hardships of his life, and upon one occasion, in delivering an address to a body of workmen, said:

Workmen, I know what it is to be poor; I know what it is to work for fifty cents a day and board myself; I know what it is to wish for the first white shirt; I know what it is to live week in and week out on mush and milk; I know what it is to sleep next to a clapboard roof and have the snow blow in and cover my head; I know what it is to stand on the outside of a circus tent and hear the music and the clown within, and wish I had a quarter to take me in; I know more—I know what it is to look wishfully in a show case, filled with gingerbread, and wish I had a penny to buy some. Knowing these things from hard experience, I say it makes my blood boil to hear any man say one word that will tend to encourage a man in a waste of time and idleness.

Peter E. Studebaker died in 1897, aged sixty-one years, the week following his return from the reunion at Ashland,

and his death was a shock to the community in which he lived. He was Vice President of the company, and its manager at the time of his death.

In 1870, Jacob F. joined the company as a salesman, and served faithfully in important capacities until his death, at the age of forty-three. While he was less prominent than his three brothers, he was nevertheless a factor in the success of the company.

The Studebaker brothers were all of philanthropic and generous disposition. Among their notable gifts is a \$250,000 Y. M. C. A. building in the city of South Bend, presented in October, 1908, when the following resolution was passed by the directors of the company:

Studebaker Brothers Manufacturing Company is prompted to this gift by a keen sense of the great worth resulting from the work of the Young Men's Christian Association in any community, by the desire to furnish a medium for the perpetuation of that work, and through this gift not only to conserve that purpose, but also to erect a perpetual monument to the memory of the five brothers—Henry, Clem, John M., Peter E., and Jacob F. Studebaker, whose business activity and industry, covering a period of more than half a century, contributed to the upbuilding of their community and the possibility for Studebaker Brothers Manufacturing Company to make this contribution for the development of the well being and usefulness of young men.

The Studebaker brothers were friends and associates of the early pioneers of Chicago, including such men as George M. Pullman, Nelson Morris, P. D. Armour, J. B. Forgan, Marshall Field, and Cyrus H. McCormick, and were large investors in Chicago real estate, which in after years returned handsome profits to them and their children.





## Chapter 2

### *H. & C. Studebaker*



THE firm of H. & C. Studebaker was established in South Bend, Indiana, in 1852, with a capital of \$68 and plant equipment consisting of two forges. They built two or three wagons the first year, one especially for their younger brother, J. M., who assisted in the work, to make a trip to California. This "covered wagon" was one of the train which arrived in good condition at old Hangtown, California, in August, 1853, as related in the previous chapter. Small business and slow progress necessarily characterized the early struggles of the little firm. Like thousands of other little shops existing then and existing today, it seemingly had a limited future, and enjoyed only a local reputation. In 1856, the brothers built their first carriage, and a specimen of their work at this period is now in the Studebaker Museum at South Bend.

Meantime, J. M. was working in California at making wheelbarrows and miners' picks and repairing stage



STUDEBAKER PLANT, 1858



STUDEBAKER BUGGY, BUILT 1857



coaches. He communicated to his brothers back home his knowledge of the physical conditions encountered by wagons making overland trips to the far West, and profiting by his advice, they built Studebaker wagons to meet these requirements and sold them to pioneers in considerable quantities for those days. Their resources and credit were insufficient to finance their growing business, and Henry was imbued with a desire to become a farmer. They appealed to J. M., therefore, to return to South Bend and buy out Henry's interest with the money he had made in California, with the result that J. M. returned in 1858 and invested \$8,000 fresh capital in the business. This small sum was a fortune in those days, and it rehabilitated the credit and enlarged the opportunities of the business. Supplemented by the indomitable purpose, tireless energy, and mechanical ability of J. M., a woodworker as well as a blacksmith, it necessarily followed that the firm of H. & C. Studebaker should become revitalized and successful. Clem and J. M. were an unbeatable combination, and they proceeded to make good without delay. They went after the business of the migrating pioneers and the wagon train operators who already knew J. M.'s record and reputation and believed in the reliability of the wagons he produced. They built up a big business in this field, so big in fact, that their brother, Peter E., who was a merchant at Goshen, Indiana, was induced to sell out and take charge of the sales department of the firm. Peter went to St. Joseph, Missouri, an assembling place for wagon trains,

where a distributing point for Studebaker wagons was established. The business grew to such extent that it became necessary in 1870 to open a branch house at St. Joseph and stock it with Studebaker wagons. This was the first Studebaker branch. Naturally, the pioneers and wagon train operators disseminated their knowledge of Studebaker wagons wherever they went. The Mormons, who had emigrated to Utah, became large buyers of Studebaker wagons, and the settlers of the great Northwest also patronized the little firm, now growing into greatness. Remember there were no railroads in those days, and the only vehicles for transporting passengers and freight were buggies and wagons. It took months to travel from St. Joseph to Salt Lake, San Francisco, or Portland. Today, Studebaker automobiles make the trip in a few days, and hundreds of thousands of them are in service in this great section of America where, perhaps more than anywhere else, the name STUDEBAKER is revered and respected. The foundation of its enduring reputation was made by the "covered wagons" of the pioneers. Their children and their grandchildren of today are driving Studebaker automobiles.

It was not until 1869 that the Union Pacific Railroad was opened to traffic, and even then it tapped but a small part of the great western empire.

As business developed, branch houses were established at Salt Lake City, San Francisco, and Portland.

War was declared between the agricultural South and the industrial North. Ammunition, clothing, accoutrements,

food, horses, saddles, harness, wagons, ambulances, and other things were immediately demanded by the United States Government. Wagons and ambulances were essential to the movement of troops and supplies. Where were they to be obtained in quantities? Where did the government look? According to the Bureau of Census report of 1870, H. & C. Studebaker were a most important source of supply. New buildings and equipment were provided, and many vehicles were furnished for war purposes, but the report says the Studebakers were unable to satisfy fully the demands made upon them.

When the war ended, the reputation of Studebaker vehicles had widened to cover the East as well as the West, and the firm of H. & C. Studebaker had become an important factor in the industrial life of the nation. Its products comprised wagons, carriages, and buggies, which enjoyed a large sale, and some export business was beginning to come in unsolicited.

On January 1, 1868, the net tangible assets of H. & C. Studebaker amounted to \$223,269.06, and the sales to about \$350,000 annually. The business had grown to such extent that it was determined to form a corporation, and accordingly, Studebaker Brothers Manufacturing Company was organized.



STUDEBAKER PLANT, 1868



## Chapter 3

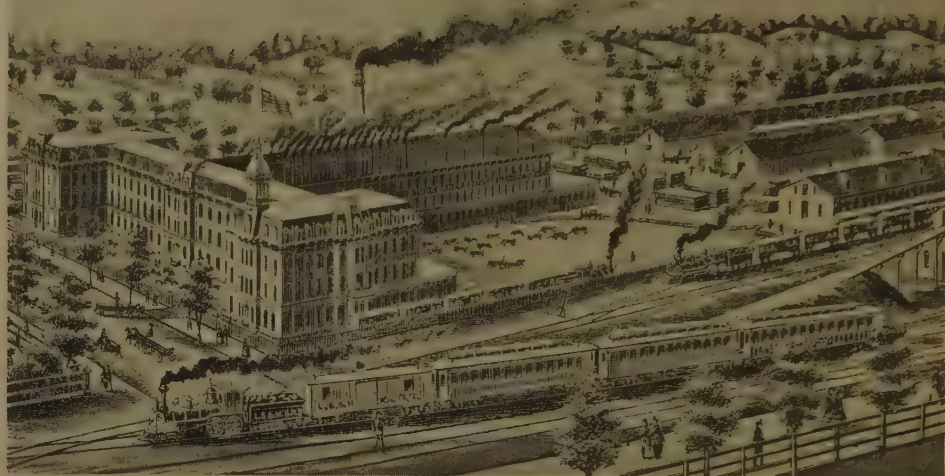
### *Studebaker Brothers Manufacturing Company*



STUDEBAKER BROTHERS MANUFACTURING COMPANY was organized March 26, 1868, under the statutes of Indiana, with a capital of \$75,000, paid in one-third each by Clem, John M., and Peter E. Studebaker, who composed the directorate. Clem was elected President; John M., Treasurer; and Peter E., Secretary, at annual salaries of \$2,000 each. The withdrawals of money by the brothers for personal expenses were habitually quite small, as the profits were needed for factory enlargement and increased working capital made necessary by expanding business. Bank loans, in addition to the use of surplus profits, were constantly resorted to for financing the business.

By 1874, large four-story buildings had been added to the factory facilities, when unfortunately a devastating fire almost destroyed the plant. It was immediately rebuilt on a big scale, and in 1876 the factory was an imposing





STUDEBAKER PLANT, 1872



STUDEBAKER PLANT, 1876

structure of modern buildings, adequately equipped. Expansion did not stop, however, as continual enlargements of plant were necessary for the ever increasing business of the company.

In the 80's and early 90's, new types of vehicles for the use of municipalities and contractors were added to the line. These consisted of sprinklers, flushers, sweepers, dump wagons, etc. The manufacture of harness was also undertaken on an extensive scale.

In 1885, the company erected in Chicago on the Michigan Avenue lake front the Studebaker Repository, an eight-story building adjoining the lot where the Auditorium Hotel now stands. This building was at that time the finest business building on Michigan Avenue, and is now known as the Fine Arts Building, and houses the Studebaker Theatre and The Playhouse, besides being a congenial home for the artists of Chicago in music, painting, and sculpture.

Branch houses, in addition to those at Salt Lake City, San Francisco, and Portland, had been opened in Kansas City, Denver, Minneapolis, Dallas, New York City, and elsewhere. The dealers' organization had comprehensively extended so that representation was had in practically all of the cities and towns of the country where vehicles and harness were sold. Dealers were established in foreign countries, and the export business was considerable. The sales organization was thus developed on a big scale under the management of Peter Studebaker, and the company





STUDEBAKER PLANTS, SOUTH BEND, 1890



STUDEBAKER PLANTS, SOUTH BEND, 1910

became one of the largest, if not the largest, manufacturer of horse-drawn vehicles in the world.

The reputation of Studebaker vehicles in England at the outbreak of the Boer war is illustrated by the fact that the British Government purchased a number of them for use of its army in South Africa. When the war ended, Lord Roberts, who commanded the British Army, said in his official report to the British Parliament: "Wagons were imported from the United States, and these proved to be superior to any other make, either of Cape or English manufacture." Part, if not all of these wagons, were of Studebaker make.

It was inevitable, with the advent of the automobile in the late 90's, that the company should become interested in this new vehicle and its possible bearing upon its future business. Hence, we find the company, in the spring of 1897, building and experimenting with a "horseless vehicle," as it was described in the minutes of the directors of May 12th of that year; also, in 1899, building bodies for electric runabouts made by another company. And in 1902, actually launching into the building of electric runabouts and trucks, of which twenty were sold in that year, and a total of 1,841 up to 1912, when it abandoned electric machines. Also, in 1904, the company began building gasoline propelled automobiles, and during the next seven years built and sold 2,481 passenger cars and trucks, the chassis of which were made on contract by another company, while the bodies were produced in its own plants at South Bend,

and final assembly completed there. The sales value of the 4,322 electric and gasoline cars was \$9,169,563.03. The first electric runabout produced was sold February 12, 1902, to F. W. Brees of Macon, Mo., and the first gasoline car, a sixteen-horse-power two-cylinder machine, sold July 22, 1904, to H. D. Johnson, South Bend, Ind. Being assured of the future of the automobile, the management now perceived the necessity of embarking in the business on a large scale commensurate with its position in the vehicle industry, and sufficient to employ the facilities of its large plants and its sales organization throughout the world. Moderately priced automobiles that could be built and sold in large quantities were the necessary answer to this problem, and therefore, in September, 1908, the company effected an agreement with the Everitt-Metzger-Flanders Company, of Detroit, then being organized to manufacture machines of this character, under which it obtained exclusive rights for the sale of Studebaker-E-M-F cars. It later acquired substantial stockholdings in the Everitt-Metzger-Flanders Company, and in 1910, complete ownership of its business, plants, assets, and trade names. In 1911 The Studebaker Corporation was organized, and, as will be seen in succeeding chapters, this undertaking proved quite successful. Great automobile plants have since been constructed in South Bend, Detroit, and Walkerville, Ont., with a present capacity of 180,000 automobiles per annum.

During the forty-three years that Studebaker Brothers Manufacturing Company operated as a corporation, it

# STUDEBAKER BROTHERS MANUFACTURING CO.

manufactured and sold over one million horse-drawn vehicles of all kinds, and large quantities of harness, the total sales value of which amounted to \$119,249,000, as shown by the following table:

SALES AND DIVIDENDS		
<i>Year</i>	<i>Sales</i>	<i>Dividends</i>
1868. . . . .	\$ 360,619.25	.....
1869. . . . .	463,246.76	.....
1870. . . . .	566,212.46	.....
1871. . . . .	608,614.30	\$107,587.48
1872. . . . .	687,963.55	.....
1873. . . . .	820,019.59	.....
1874. . . . .	761,116.95	.....
1875. . . . .	1,032,040.96	150,000.00
1876. . . . .	996,846.05	.....
1877. . . . .	1,107,269.80	150,000.00
1878. . . . .	1,180,872.27	150,000.00
1879. . . . .	1,199,908.24	100,000.00
1880. . . . .	1,526,143.09	100,000.00
1881. . . . .	1,670,407.97	100,000.00
1882. . . . .	1,979,264.82	100,000.00
1883. . . . .	1,929,460.64	100,000.00
1884. . . . .	1,776,947.55	100,000.00
1885. . . . .	1,637,561.25	100,000.00
1886. . . . .	1,892,602.89	100,000.00
1887. . . . .	2,155,512.16	200,000.00
1888. . . . .	2,039,461.78	200,000.00
1889. . . . .	2,098,396.47	300,000.00
1890. . . . .	2,161,094.45	300,000.00
1891. . . . .	2,236,578.59	150,000.00
1892. . . . .	2,299,605.03	150,000.00
1893. . . . .	1,896,176.02	.....
1894. . . . .	1,636,341.73	100,000.00
1895. . . . .	2,291,183.67	100,000.00





FIRST STUDEBAKER BRANCH, ST. JOSEPH, MISSOURI, 1870



STUDEBAKER REPOSITORY, CHICAGO, 1885

# STUDEBAKER BROTHERS MANUFACTURING CO.

## SALES AND DIVIDENDS—*Continued*

<i>Year</i>	<i>Sales</i>	<i>Dividends</i>
1896. . . . .	\$ 2,014,205.33	\$ 150,000.00
1897. . . . .	2,785,255.68	144,000.00
1898. . . . .	3,227,716.91	180,000.00
1899. . . . .	3,995,519.11	180,000.00
1900. . . . .	3,970,228.48	216,000.00
1901. . . . .	3,682,890.89	216,000.00
1902. . . . .	4,083,000.17	216,000.00
1903. . . . .	4,695,188.71	216,000.00
1904. . . . .	4,839,520.68	216,000.00
1905. . . . .	5,226,540.52	216,000.00
1906. . . . .	6,818,929.23	216,000.00
1907. . . . .	7,827,571.92	306,000.00
1908. . . . .	5,959,790.47	306,000.00
1909. . . . .	9,507,915.63	306,000.00
1910. . . . .	9,603,661.32	816,500.68
Totals . . . . .	<u>\$119,249,403.34</u>	<u>\$6,758,088.16</u>

The steady growth of sales was interrupted but slightly during the years of depression or panic which occurred during the forty-three years under review. A substantial volume of business was transacted in every year, despite depression. The characteristic patience, industry, and economy practiced by the Studebaker brothers are reflected in the small amount of dividends they declared from the profits. Out of \$16,000,000 earned by the Studebaker Brothers Manufacturing Company during the forty-three years of its operations, \$10,000,000 was retained in the business and only \$6,000,000 was distributed to the stockholders in dividends. The hearts as well as the heads of the Studebaker brothers were always in the business.

# THE STUDEBAKER CORPORATION

The original balance sheet of the company and the closing balance sheet at the time of its merger into The Studebaker Corporation, are given below:

BALANCE SHEETS		
<i>Assets</i>	<i>Jan. 1, 1868</i>	<i>Dec. 31, 1910</i>
Cash . . . . .	\$ 175.12	\$ 444,524.94
Receivables . . . . .	91,998.53	4,772,672.74
Investments . . . . .	.....	600,019.13
Inventories . . . . .	123,864.91	12,305,285.30
Plants and Property . . . . .	64,175.00	5,984,697.11
Deferred Charges . . . . .	.....	211,124.50
Total . . . . .	\$280,213.56	\$24,318,323.72
<i>Liabilities</i>		
Notes Payable . . . . .	\$ 46,532.78	\$ 8,491,974.02
Accounts Payable . . . . .	10,411.72	1,382,386.58
Minority Stock Sub. Co.'s . . . . .	.....	29,100.00
First Mortgage 5% Bonds . . . . .	.....	2,700,000.00
6% Preferred Stock . . . . .	.....	1,500,000.00
Common Stock . . . . .	.....	3,600,000.00
Surplus . . . . .	223,269.06	6,614,863.12
Total . . . . .	\$280,213.56	\$24,318,323.72
Net Worth . . . . .	\$223,269.06	\$11,714,863.12





## Chapter 4

### *Everitt-Metzger-Flanders Company*



THE Everitt-Metzger-Flanders Company was incorporated under the laws of Michigan, August 4, 1908, with a capital stock of \$500,000, which was increased on October 7th of the same year to \$1,000,000. The company was organized to manufacture and market in large quantities a medium-priced gasoline-propelled automobile.

\* Promptly after the organization of the company, Studebaker made an arrangement with it under which Studebaker obtained certain exclusive rights to sell the product to be known as Studebaker-E-M-F cars. Studebaker shortly afterwards acquired substantial stockholdings in the company, and in the following year purchased the remaining stock and became sole owner of the business.

The company, immediately upon organization, acquired by purchase the plant, property, and assets of the Wayne Automobile Company of Detroit, and in October, 1908, the plants, property, and assets of the Northern Auto-



E-M-F PLANT, 1910



E-M-F PLANT, 1911

# EVERITT-METZGER-FLANDERS COMPANY

bile Company, of Detroit and Port Huron, increasing its capital stock from \$500,000 to \$1,000,000, to provide the necessary capital. The growth and expansion of the business was so rapid that the company was compelled to increase its plants and facilities, and by October 1, 1909, it operated and owned the following plants: Wayne Automobile Company, of Detroit; Northern Motor Car Company, of Detroit and Port Huron; Deluxe Motor Car Company, of Detroit; Monroe Manufacturing Company, of Pontiac, Michigan; Western Malleable Steel Company, of Detroit; Pressed Steel Sanitary Manufacturing Company, of Detroit; Everitt-Metzger-Flanders Company, of Canada.

The record of the company during its two and one-half years of operations shows the following remarkable results:

<i>From</i>	<i>Cars Produced</i>	<i>Sales</i>	<i>Net Profits</i>
Aug. 4, 1908, to Dec. 31, 1909. .	8,132	\$ 7,366,428.27	\$1,607,776.17
Year Ending Dec. 31, 1910. .	15,300	13,869,986.87	1,606,305.72
Totals . . .	23,432	\$21,236,415.14	\$3,214,081.89
		<i>Dividends</i>	<i>Surplus</i>
Aug. 4, 1908, to Dec. 31, 1909. . . . .		\$314,824.00	\$1,292,952.17
Year Ending Dec. 31, 1910. . . . .		250,000.00	1,356,305.72
Totals. . . . .		\$564,824.00	\$2,649,257.89

# THE STUDEBAKER CORPORATION

The Company was merged into The Studebaker Corporation as of December 31, 1910, and the following balance sheets show its condition at the time of its formation and of its later merger:

BALANCE SHEETS		
<i>Assets</i>	<i>Aug. 4, 1908</i>	<i>Dec. 31, 1910</i>
Cash . . . . .	\$ 52,322.59	\$ 70,492.40
Receivables . . . . .	55,450.09	919,304.68
Investments . . . . .	.....	142,494.16
Inventories . . . . .	95,738.28	2,338,134.62
Plants and Property . . . . .	153,438.77	3,827,293.23
Deferred Charges . . . . .	16,358.15	40,234.02
Total . . . . .	<u>\$373,307.88</u>	<u>\$7,337,953.11</u>
<i>Liabilities</i>		
Notes Payable . . . . .	\$ 17,873.50	\$1,765,262.67
Accounts Payable . . . . .	94,434.38	1,923,432.55
Capital Stock (Issued). . . . .	261,000.00	1,000,000.00
Surplus . . . . .	.....	2,649,257.89
Total . . . . .	<u>\$373,307.88</u>	<u>\$7,337,953.11</u>
Net Worth . . . . .	<u>\$261,000.00</u>	<u>\$3,649,257.89</u>



PART II

THE STUDEBAKER  
CORPORATION

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## Chapter 5

### *Organization*



THE STUDEBAKER CORPORATION was organized and incorporated February 14, 1911, under the laws of the State of New Jersey, to acquire the assets, trade name, good will, and patent rights of Studebaker Brothers Manufacturing Company and Everitt-Metzger-Flanders Company, as of January 1, 1911, with an authorized capitalization as follows:

*7% Cumulative Preferred Stock:*

Authorized, 150,000 shares, par \$100 . . . . .	\$15,000,000
Of which there were issued 135,000 shares, par \$100 . . . . .	13,500,000

*Common Stock:*

Authorized and issued, 300,000 shares, par \$100 . . . . .	\$30,000,000
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The tangible assets of the merged companies, amounting to \$15,364,121.01, were augmented by proceeds from the sale of preferred stock, at par, amounting to \$8,328,602.35, kept in the treasury of the corporation, and its initial tangible assets were, therefore, \$23,692,723.36 as shown by the balance sheet on page 95.

Certain extracts from the Certificate of Incorporation as originally adopted and amended to the present date, relating to capitalization and organization, which may be of general interest, are as follows:

SECOND—The location of its principal office in the State of New Jersey shall be at 15 Exchange Place, Jersey City, Hudson County, New Jersey, and the name of the agent therein and in charge thereof, and upon whom process against the Company may be served, until changed in the manner prescribed by law, is The Corporation Trust Company.

FOURTH—(d) On or before the first day of July, 1912, and on the first day of July in each and every year thereafter, there shall be set apart in a "Special Surplus Account" out of the surplus or from the net profits arising from the business of the Company after all cumulated and defaulted dividends upon said preferred stock shall have been paid, or set apart, an amount equal to at least three per cent (3%) of the largest amount in par value of said preferred stock that shall have been, or may be at any one time issued and outstanding. Within one year after the first day of July, 1912, and within one year after the first day of July in each and every year thereafter, the Company shall acquire preferred stock up to an amount which, at the purchase price thereof, shall equal the amount then standing to the credit of said Special Surplus Account. Said preferred stock shall be acquired (1) at the lowest price at which the same may be obtainable by the Company but in no event exceeding \$125 per share plus accrued and unpaid dividends thereon, and (2) in such manner as the Board of Directors may from time to time determine. The preferred stock thus acquired shall never be re-issued by the Company but shall be forthwith canceled. Any deficiency in the amount required to be set apart in any year to the credit of said Special Surplus Account shall be made good out of the net profits of the Company in subsequent years before any dividend shall be declared or paid upon the common stock.

(e) In no event shall any dividend be paid or declared on the common stock in any year until (1) all arrears in respect of said Special Surplus Account or in the acquisition of preferred stock therefor shall have been made good, and (2) there shall have been first accumulated and set apart on account of said Special Surplus Account at least the

## ORGANIZATION

sum of One Million Dollars (\$1,000,000) either in the form of cash or its equivalent, or of preferred stock theretofore acquired and canceled by the Company taken at the price paid therefor.

(f) In no event shall any dividend in excess of six per centum in any year be paid or declared on the common stock until there shall have been first accumulated and set apart on account of said Special Surplus Account at least the sum of \$2,500,000, either in the form of cash or its equivalent or of preferred stock theretofore acquired by the Company taken at the price paid therefor.

(k) The entire voting power for the election of directors shall be vested in the common stock, except as in this paragraph otherwise provided. The preferred stock shall have no voting power in the elections for directors unless and until two quarterly dividends payable thereon shall be in default. Immediately upon the happening of such event, and thereafter until such defaults and all defaults subsequent thereto shall have been made good, the common stock shall have no voting power in the elections for directors, and the entire voting power in the elections for directors shall become and remain vested exclusively in the preferred stock. However, if and when the defaulted dividends shall thereafter be paid, the voting power in the elections for directors shall again be vested exclusively in the common stock.

NINTH—(d) The Directors shall also have power: (1) To provide by the by-laws, or otherwise, for the selection, from among their own number, of an executive committee of such number as they may from time to time designate, and to delegate to such executive committee all or any of the powers of the Board of Directors, provided that such delegation of power is not contrary to law; (2) to appoint such other standing committees as they may determine, with such powers as shall be conferred by them or as may be authorized by the by-laws; and (3) to appoint other officers of the Company, and also one or more vice presidents, one or more assistant treasurers and one or more assistant secretaries, and to provide that the persons so appointed shall have, and may exercise, all or any of the powers of the President, of the treasurer, and of the secretary, respectively.

The By-Laws, as originally adopted and amended to date, provide among other things:

That annual meetings of the stockholders of the corporation shall be held, at the principal office of the Company in the State of New Jersey, at 12:00 o'clock noon on the first Tuesday of April in each year.

That special meetings of stockholders may be called by a majority of the directors.

That for the transaction of any business upon which the holders of either the preferred or the common stock alone are entitled to vote one-third of the outstanding shares shall constitute a quorum. On business upon which both classes of stock can vote, one-third of the total of both outstanding stocks constitutes a quorum.

That six directors shall constitute a quorum at meetings of the board.

That the Finance Committee shall consist of the Chairman of the Board, the President, the Treasurer, and such other persons as may be designated by the Board to serve on said committee.

That this committee shall have full control of the financial operations and business of the corporation, in all its branches, subject to the approval of the Board or Executive Committee.

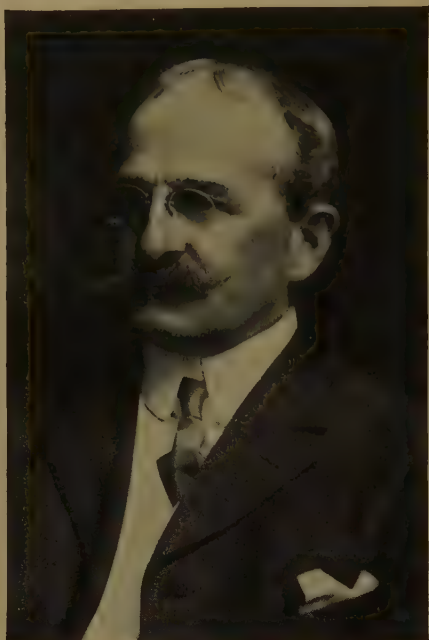
The financing of the new corporation, which was handled by the banking firms of Goldman, Sachs & Co. and Lehman Bros. of New York City, was of an ultra-conservative character, in that preferred stock was issued for only 57% of its net tangible assets, which gave the stock an original book value of \$175.50 per share, of which \$103.03

per share was represented by quick assets, and the common stock an original book value of \$36.49, of which \$1.47 was in net quick assets.

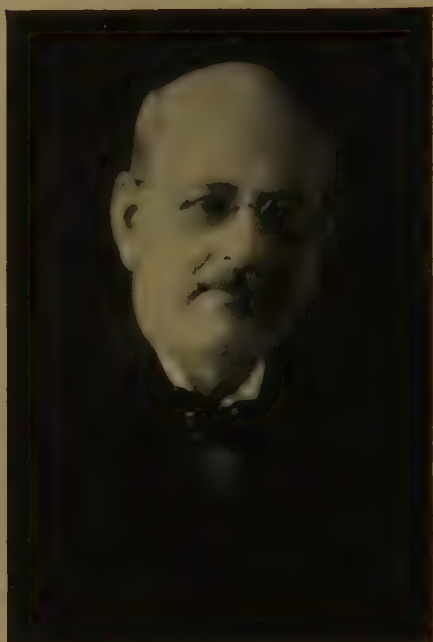
Mr. Henry Goldman and Mr. Philip Lehman, who became directors of the corporation and members of its Executive Committee at the time of its organization, constantly gave it the benefit of their sound advice and great ability, without compensation. Mr. Goldman, since retired from business, remains on the board. Mr. Lehman retired several years ago in favor of his partners, Arthur Lehman and Herbert H. Lehman. Waddill Catchings, representing Goldman, Sachs & Co., also became a member of the board upon the retirement of Mr. Goldman from that firm. These three latter gentlemen measure up to the standard set by their predecessors in serving the interests of stockholders. Messrs. Catchings and Arthur Lehman are members of the Executive Committee. A. Barton Hepburn of New York (deceased) was a valued director of the corporation up to the date of his untimely death. One of the outstanding figures in the formation of the corporation, and a staunch and able servant of the stockholders, is Frederick P. Delafield of New York, special counsel, a director, and a member of the Executive Committee from the date of its organization.

The man most responsible for the formation of the corporation was Frederick S. Fish of South Bend, who later became President, and is now Chairman of the Board and a member of the Executive and Finance Committees. In 1891,





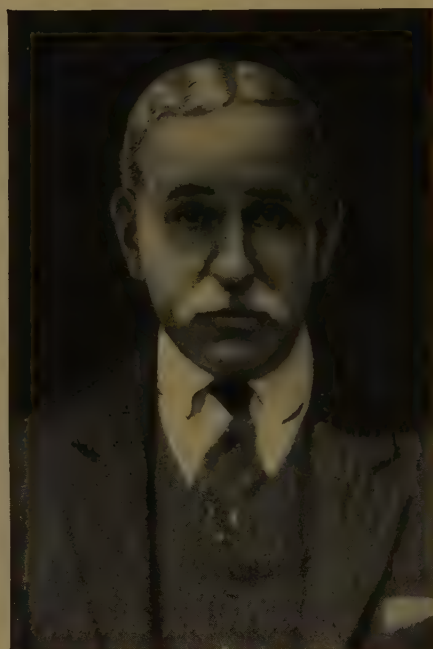
FREDERICK S. FISH



HENRY GOLDMAN



FREDERICK P. DELAFIELD



PHILIP LEHMAN



Mr. Fish, who had married a daughter of J. M. Studebaker, associated himself with the three brothers in the conduct of the business, as a director and general counsel of Studebaker Bros. Manufacturing Company. Mr. Fish was a practicing lawyer in New Jersey, admitted to its bar in 1876, and was President of the Senate of New Jersey in 1887. His business activities were largely in the direction of corporations, and particularly in the city of New York. In 1897, on the death of Peter Studebaker, he became Chairman of the Executive Committee of the company, and thereafter was a dominating influence in the conduct of its affairs. Owing to his foresight, initiative, and effort, the company became interested in the "horseless vehicle," and thereafter expanded into the automobile business, and ultimately merged into The Studebaker Corporation. Mr. Fish and Mr. Delafield conducted the negotiations with the bankers which led to the formation of the corporation. Clement Studebaker, Jr. and George M. Studebaker, sons of Clem, and at that time officers of the company and large stockholders, participated in these negotiations.

The directors of the corporation during 1911, its first year, were Frederick P. Delafield, Henry Goldman, A. Barton Hepburn, William R. Innis, Philip Lehman, Frederick S. Fish, Clement Studebaker, Jr., George M. Studebaker, J. M. Studebaker, Walter E. Flanders, James N. Gunn, and John R. Turner. The officers were J. M. Studebaker, Chairman; Frederick S. Fish, President; Clement Studebaker, Jr., First Vice President; George M. Stude-

baker, Vice President; Walter E. Flanders, Vice President; A. R. Erskine, Treasurer (in December); and Scott Brown, Secretary.

In proceeding with the corporation's history, it seems best to separate the operations of thirteen years into three divisions, because the war period interrupted the plans of the management and the commercial progress of the corporation to the extent of materially affecting its business and profits.



## Chapter 6

### *Pre-War Record*



THE pre-war record covers the four years of 1911 to 1914, inclusive. The first year of the new corporation was encouraging, in that sales of automobiles increased to 22,555 from 15,300. Substantial expenditures for plant enlargement were made in 1912, and all corporate and branch accounting work was brought into the Home Office, and new accounting systems were installed throughout. The production of electric automobiles at South Bend was discontinued in this year, and the business was liquidated. It had been conducted for nine years without much success, and the ultimate superiority of the gasoline car had become apparent.

Mr. Flanders retired from the corporation in the early part of 1912, and in the latter part, a new line of gasoline cars bearing the name STUDEBAKER in place of E-M-F was put on the market with considerable success. The sales of the automobile division showed a good increase over the previous year, while the increase of the vehicle divi-



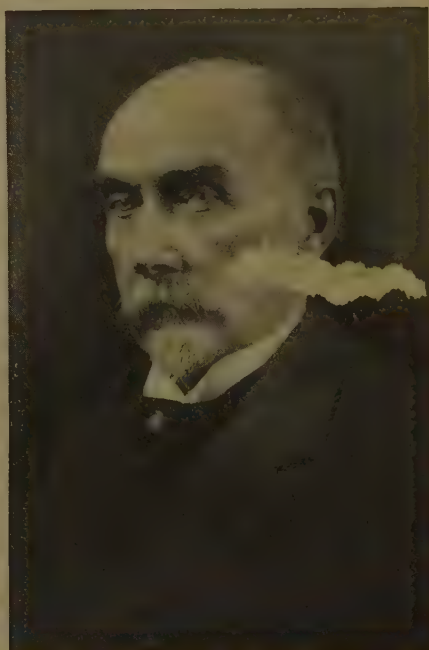
WADDILL CATCHINGS



ARTHUR LEHMAN



HERBERT H. LEHMAN



A. BARTON HEPBURN

sion amounted to 24%. In this year, the corporation sold its stock in the Garford Company and its Port Huron plant.

In order to fund its bank loans, the corporation issued \$8,000,000 of 5% ten-year serial gold notes dated March 1, 1912, and applied the proceeds to this purpose. Incidentally, subsequent prosperity permitted the calling of these notes for redemption and their retirement March 1, 1916, four years later.

Arrangements were made in 1913 to abandon the Pontiac plant, where touring car bodies were made, and transfer this work to the South Bend plants, which also began manufacturing springs and castings for the Detroit plants. A substantial increase in sales of automobiles and a small increase of vehicle sales was accomplished in this year. The Finance Committee was created in August, and in December, Clement Studebaker, Jr. retired as First Vice President in favor of the author, who retained also the office of Treasurer. James G. Heaslet, Chief Engineer, was appointed Vice President in charge of engineering and production at this time, with responsibility for both the automobile and vehicle divisions.

Sales in the last half of 1914, in both divisions, were considerably curtailed by the temporary depression resulting from the declaration of war, especially in the Southern States, where cotton was selling for less than 10c a pound. Both the number of cars and amount of sales, however, exceeded those of the previous year, while the net profits, amounting to \$4,441,966.16, were a record. Under the





J. M. STUDEBAKER, JR.



FREDERICK STUDEBAKER FISH



IRA C. JONES



A. B. THIELENS

direction of Mr. Heaslet and Mr. Wollering, who was then the General Production Manager, the Manufacturing Departments of the Detroit plants were vigorously reorganized. Better methods and economies were instituted which resulted in the production of 35,460 cars with an average of 5,146 employees, as against 35,410 the previous year with 7,129 average number of employees. The reduction in costs resulting from this was the principal cause of the increase of 150% in the net profits.

A profit sharing plan was adopted April 15th of this year under which all executives, including managers, superintendents, foremen, and their chief assistants were offered a participation in the net profits of the corporation and its subsidiary companies, over and above the amount necessary to cover (1) the 7% dividends on the preferred stock, (2) the 3% amortization of said stock, and (3) 5% on the outstanding common stock. Of the excess net profits, if any, the profit sharing fund would constitute 12% of the first \$1,000,000, 14% of the next \$1,000,000, and 15% of all over \$2,000,000 of excess net profits. Both the fund and participants would be divided into three parts or divisions, and distribution would be made on a per capita basis. Fifty percent of the fund would be paid in cash, and 50% in common stock at cost to the corporation, deliverable to participants 25% after the first year, 25% after the second year, and 50% after the third year, provided they continued uninterruptedly in the service of the corporation. The announcement of this plan had an electrical effect upon

# THE STUDEBAKER CORPORATION

the organization, and undoubtedly stimulated them to the exercise of every ounce of their ability. When the books were closed in 1915, it developed that \$271,166.24 had been earned by the participants, and they richly deserved it. Further record of profit sharing for management and co-operative rewards for labor will be described hereafter.

The sales, net profits, dividends, and surplus of the four-year pre-war period are shown in the following table:

<i>Dec. 31</i>	SALES		NET PROFITS		DIVIDENDS		<i>Surplus</i>
	No. Cars	Amount	Amount	Percent Sales	Preferred	Common	
1911	22,555	\$28,487,847.29	\$1,653,582.04	5.8	\$708,750	None	\$ 944,832.04
1912	28,523	35,440,327.41	2,313,245.14	6.5	930,825	None	1,382,420.14
1913	35,410	41,464,949.82	1,772,473.65	4.3	901,075	None	871,398.65
1914	35,460	43,444,223.41	4,441,966.16	10.2	869,050	None	3,572,916.16
Total	121,948	148,837,347.93	10,181,266.99	6.9	3,409,700	None	6,771,566.99



## Chapter 7

### *War Record*



THE war record covers the four years from 1915 to 1918, inclusive, and description of it will relate first to the part the corporation played in the work of the war, after which the commercial activities will follow. The corporation did not allow war orders received from Great Britain, France, and Russia to interrupt or interfere with its regular commercial business, which was pursued vigorously up to the time the United States declared war.

When the war broke out in 1914, most statesmen, bankers, business men, and economists believed that it would be confined to European countries and be of short duration, chiefly because of its enormity and destructive wastefulness. One outstanding figure, later placed in command at the British War Office, believed differently. Lord Kitchener predicted the war would last three years, and the War Office began buying military supplies on this assumption. In September, 1914, the corporation received a cable from its London dealer inquiring whether and how soon it

could manufacture and ship 3,000 transport wagons for the British Army, of a modified pattern of mountain wagon illustrated in the Studebaker catalog. The urgency of the case justified the British War Office in departing from their own standard specifications and accepting a Studebaker stock model wagon, with modifications adapting it to transport use. Fortunately, raw materials were on hand or available at South Bend for quick action, and above all, well seasoned lumber stock, air dried, was available. Cables were accordingly dispatched advising that shipments could start in two weeks and the order be completed in sixty days. The War Office placed the order and advised that inspection officers would leave promptly to inspect the manufacture and accept the wagons for its account. The manufacturing department got busy on the order, commenced shipments within two weeks, and almost completed it before the inspectors arrived. The War Office was delighted with such service. In October, 1914, another cable arrived, advising that a sample set of English six-horse artillery harness with saddle would be delivered to a representative of the corporation by the purser of a steamer then sailing. It inquired whether the corporation could manufacture and deliver 20,000 sets of the harness and 60,000 artillery saddles with blankets within twenty weeks from the date of the receipt of an order. The proposal was staggering, because it involved perhaps the largest harness order ever placed. It was questionable whether the twenty largest harness and saddle factories in



the United States could in combination meet the requirements. The Studebaker harness plant, a sizable factory, figured it could make 1,000 sets of the harness only. Communications were immediately established with practically all of the prominent harness and saddle manufacturers between the Allegheny and Rocky Mountains, from the Gulf to Canada. Over fifty sent representatives to South Bend, where the sample and specifications were examined and commitments discussed. Manufacturers of hardware, trimmings, cable traces, blankets, etc., were present. Every man told what he could do, and summing up, the corporation concluded to undertake the contract. Mr. Fish, the President, went to London to negotiate the contract with the War Office, while the author meantime was endeavoring to bind sub-contractors to acceptance of the conditions, including cancellation for failure to deliver, imposed by the War Office. Negotiations were satisfactorily concluded at both ends, contracts were signed in November, and fifty-three factories got busy executing the order. Shipments were to commence within thirty days from the date of the contract, at the rate of 1,000 sets of harness and 3,000 saddles per week, and to be completed in twenty weeks. The Roebling plant at Trenton, New Jersey, which had the contract to make the cable traces, was bombed in the middle of the job. Before the building burned down, the machinery was saved by removal, and production was delayed but one week. Cable traces, steel forgings, trimmings, blankets, leather, and other parts

were forwarded by express, as freight was too slow. The corporation's purchasing agent and several of its prominent men took the field to follow up and inspect the work of the sub-contractors who were marshaled under the Studebaker banner. One contractor had an order for 3,000 sets of harness with no saddles, and three others for 1,000 sets each, but all the rest were smaller, ranging from 200 to 800 sets each. A major of the British Army, an old cavalry officer, with a corps of "viewers," arrived from England and took the field. They were a fine body of men, absolutely true to their duty. The contract was completed in sixteen weeks, or four weeks before the stipulated time. Repeat orders were received in 1915 for substantial quantities of additional artillery harness and saddles. Additional orders from the War Office, and later from the British Purchasing Commissioner, were booked in 1915, for 1,000 sleds, 500 drinking water carts, 2,500 artillery wheels, 50 ambulances, 35,000 wheel horse harness sets, and 15,000 artillery saddles. In the spring of 1918, the British War Ministry asked the corporation to design a military caterpillar tractor equipped with a Studebaker SPECIAL-SIX motor, and its engineers, working with engineers from the Ministry, at Detroit, completed and tested a caterpillar tractor which was accepted. An order was received for 5,000 of these caterpillar tractors, which were to be used in the 1919 spring drive on to Berlin. A number of these machines were shipped before the order was canceled in December because of the armistice.

The French Government placed orders for 3,500 army wagons, 500 ambulance wagons, 400 ambulance carts, 20,000 extra wheels, and other articles, all of which were executed in 1915. The Russian Government placed orders for 2,000 transport wagons, 8,000 cannon wheels, 6,250 howitzer wheels, 2,000 sets of harness, and 475 Studebaker automobiles, all of which were executed in 1915. The All Russia Zemsky Union ordered 40,000 artillery saddles in 1915, delivery of which was completed in 1916.

All orders received from foreign governments during the

World War amounted to . . . . .	\$24,098,937
Deliveries thereon amounted to . . . . .	18,237,667
Net Profits realized amounted to . . . . .	4,141,036
Or. . . . .	22.7%

It should be stated that properly deductible charges for interest, depreciation and income taxes were not made from these net profits.

Immediately upon Germany's declaration of war, most of the employees of the Studebaker branch at Berlin were called to the army, and the Government commandeered the stock of Studebaker automobiles then on hand. George E. Willis, the manager, now Export Sales Manager of the corporation, leaving in charge the assistant manager, a trusted German beyond the age of war service, departed for St. Petersburg, where he obtained the Russian contracts just mentioned. His German assistant remained at Berlin in charge of the stock of repair parts, which was occasionally augmented, and handled the business faithfully. When the

ORIGINAL

# TELEGRAM

SENT FROM OFFICE OF THE STUDEBAKER CORPORATION, SOUTH BEND, IND.

SUBJECT TO USUAL TERMS AND CONDITIONS IMPOSED BY TELEGRAPH CO.

Receiver's No.

Time Filed

Check

South Bend, Ind., February 6, 1917. 19\_\_

To

To the President,  
The White House,  
Washington, D.C.

Studebaker factories of course are at the disposal of the Government. Any orders given us will receive preference and clear right of way.

A.R.Erskine, President,  
THE STUDEBAKER CORPORATION.

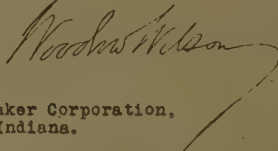
THE WHITE HOUSE  
WASHINGTON

February 6, 1917.

My dear Mr. Erskine:

Thank you for the generous assurances of  
your telegram of today. I greatly appre-  
ciate your pledge of cooperation.

Sincerely yours,



Mr. A. R. Erskine,  
President, Studebaker Corporation,  
South Bend, Indiana.

United States entered the war, his reports suddenly ceased, and the alien property custodian took over the property. A few months after the armistice was signed, this man forwarded his reports for the two intervening years, and advised the corporation that its property was safe and subject to reclamation through proper channels. This example of German rectitude was not uncommon.

In July, 1915, Mr. Fish retired from the presidency in favor of the author, and was elected to the position of Chairman of the Board.

Because of the enormous volume of its commercial business in 1916, the corporation neither sought nor received further war orders. It devoted itself assiduously to the development of its own business until the United States declared war, whereupon its duty became clear and it determined to put all its resources and ability at the disposal of the Government. It anticipated its duty, indeed, when the author dispatched a telegram to President Wilson two days after his ultimatum to Germany and two months before Congress actually declared war. This telegram read as follows:

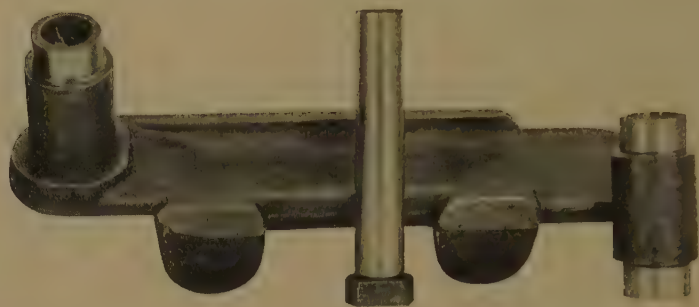
South Bend, Indiana, February 6, 1917.

To the President,  
The White House,  
Washington, D. C.

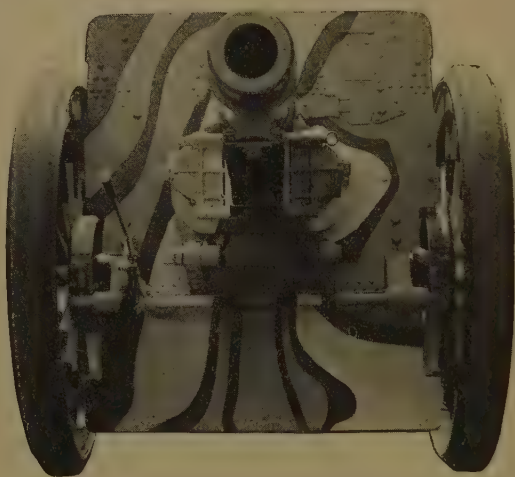
Studebaker factories of course are at the disposal of the Government. Any orders given us will receive preference and clear right of way.

A. R. Erskine, President,  
THE STUDEBAKER CORPORATION.





ROAD TRACK LINK, PIN AND BUSHING  
MARK VIII, 34,000 POUND BRITISH TANK



4.7 GUN CARRIAGE WITH GUN, FRONT VIEW



MINE ANCHOR, WITH MINE



4.7 GUN CARRIAGE WITH GUN

To this telegram President Wilson graciously replied by letter on the same day, as follows:

February 6, 1917.

My dear Mr. Erskine:

Thank you for the generous assurances of your telegram of today. I greatly appreciate your pledge of co-operation.

Sincerely yours,

Woodrow Wilson.

Studebaker was the first automobile manufacturer, and one of the first, if not the first manufacturer in the country, to offer its plants to the Government for war service. Anticipating the declaration by Congress, the War Department immediately began negotiating with the corporation for various articles, and numerous contracts were executed in the latter part of April and early in May. The plants of the corporation at Detroit were working on capacity schedules of automobiles, and those at South Bend on similar schedules of horse-drawn vehicles and harness. There was no vacant space or idle equipment available for Government business without curtailment providing it. Steps to do this were taken immediately, and on May 14th, the Finance Committee voted to reduce the production of automobiles 50% and remove all automobile work except the making of repair parts out of Plant No. 5 (475,000 sq. ft.) and concentrate it in Plant No. 3, and thereby vacate Plant No. 5 for Government work. The erection of a new four-story building costing over \$300,000 was authorized as an addition to Plant No. 3. Commercial work at South Bend was set aside for Government orders. Subsequently,

over \$2,000,000 was expended for additional buildings, dry kilns, machinery, and plant equipment necessary to take care of war work.

Orders received from the Quartermaster, Engineer, and Medical Departments included great quantities of escort wagons, trucks, artillery wheels, mountain spring wagons, garbage carts, sprinklers, sweepers, drinking water carts, dump wagons, log trucks, excavators, delivery wagons, road oilers, combat wagons, tank wagons, ambulance harness, ambulances, cavalry bridles, knife scabbards, etc. From the Ordnance Department, 500 gun carriages for 4.7 guns, 61-inch artillery wheels for 4.7 guns, 60-inch artillery wheels for 155 m/m guns, cradle rolls, wheel hubs, 480,000 track link assemblies for the big British caterpillar tanks, shell parts, shell adapters. Also, on May 18, 1918, for the forging and machining of 155 m/m shells at the rate of 4,000 per day (1,200,000 per annum), under which \$4,250,000 was allowed for special machinery and increased plant facilities, including extensions to the South Bend forge and machine shops to handle the contract. Work was begun immediately, and on November 11th, the plant was practically ready for production. The management was officially informed that the plant and layout was one of the finest in the country. But no shipments were made on this order. The buildings and equipment suitable for the corporation's use were later bought from the Government at appraised value according to the contract. Orders were executed for Navy Ordnance for 60,000 mine anchors which

were used to hold a large part of the mines employed in mining the North Sea.

In the annual report of the corporation to its stockholders for the year of 1917, the author said: "It should be stated that the large automobile operations and resulting profits of peace times are opportunities that will not be again open to us until peace returns."

Because of the higher costs resulting from reduced commercial operations and the small profits on war orders, it became apparent in the summer of 1917 that the profits of the year would suffer materially. The corporation had also been compelled again to become a heavy borrower in the banks, and therefore, the directors at their meeting on August 7th reduced the dividend on the common stock from 10% to 4%. Their wisdom was justified when the books were closed the following spring and showed only \$3,500,740.92 net profits for the year.

Early in 1918, it became certain that commercial operations must give way further to war service, and manufacturing schedules were again reduced accordingly. In the annual report of the corporation to its stockholders for the year of 1918, the author advised them as follows: "Our commercial operations during the year were seriously curtailed because of the Government's urgent need of a large part of our plant facilities and the restricted supply of iron and steel. We voluntarily met the situation and devoted ourselves cheerfully to the execution of war orders, reducing our commercial production to the lowest point nec-





AMBULANCE



ARTILLERY WHEELS



ESCORT WAGON AND  
AMBULANCE



BRITISH MILITARY TRACTOR



essary for the protection of our dealers and the preservation of our commercial organization. This enforced curtailment permitted us to produce only 18,270 automobiles, and 58,830 horse-drawn vehicles, of which latter about 50% were delivered on war contracts." When the armistice was signed, automobile production had practically ceased, and the plants were approaching a 100% war work basis.

By the latter part of December, all war contracts were canceled, and the indebtedness of the United States and British Governments, amounting to \$8,200,000, had forced the corporation to increase its bank loans to \$9,525,000. These accounts were collected promptly without dispute, in 1919, because the corporation's records and methods promptly passed the inspection and approval of the government officials.

All orders received from the U. S. Government and other contractors therewith amounted to . . . . .	\$30,979,416
Deliveries thereon amounted to . . . . .	16,909,820
Net profits realized amounted to. . . . .	979,699
Or. . . . .	5.8%

These net profits are substantially overstated, as properly deductible charges were not made against them for depreciation and interest on plant expenditures made for the Government and for income and excess profit taxes.

Max F. Wollering served as a director and General Manager of the Detroit Shell Company, a \$1,000,000 corporation organized by automotive manufacturers, including the corporation, at the request of the Ordnance Department, in December, 1917. He supervised the plant layout,

machinery and tool installation, and manufacturing operations until the liquidation of the company after the war. It was largely because of Mr. Wollering's efficient work in this connection that the Ordnance Department gave the corporation the large contract for forging and machining shells heretofore mentioned. The Detroit Shell Company machined, heat-treated, and delivered 62,000 shells.

James G. Heaslet, who resigned his position as Vice President of the corporation in the spring of 1917 in favor of Max F. Wollering, and afterwards was made an army major of the Aircraft Production Board and placed in charge of the production and inspection of airplanes in the Detroit division, was continued on the payroll of the corporation on full salary up to July 1, 1918, and performed excellent service for the Government.

Charles C. Hanch, the Treasurer and a director of the corporation, was appointed Chief of the Automotive Products Section of the War Industries Board, and continued on the payroll of the corporation at full pay until relieved of duty in the spring of 1919. Meantime, Nicholas R. Feltes was elected Treasurer, in July, 1918.

The officials and principal executives of the corporation throughout the war devoted themselves assiduously to the expedition of all government orders in preference to everything else.

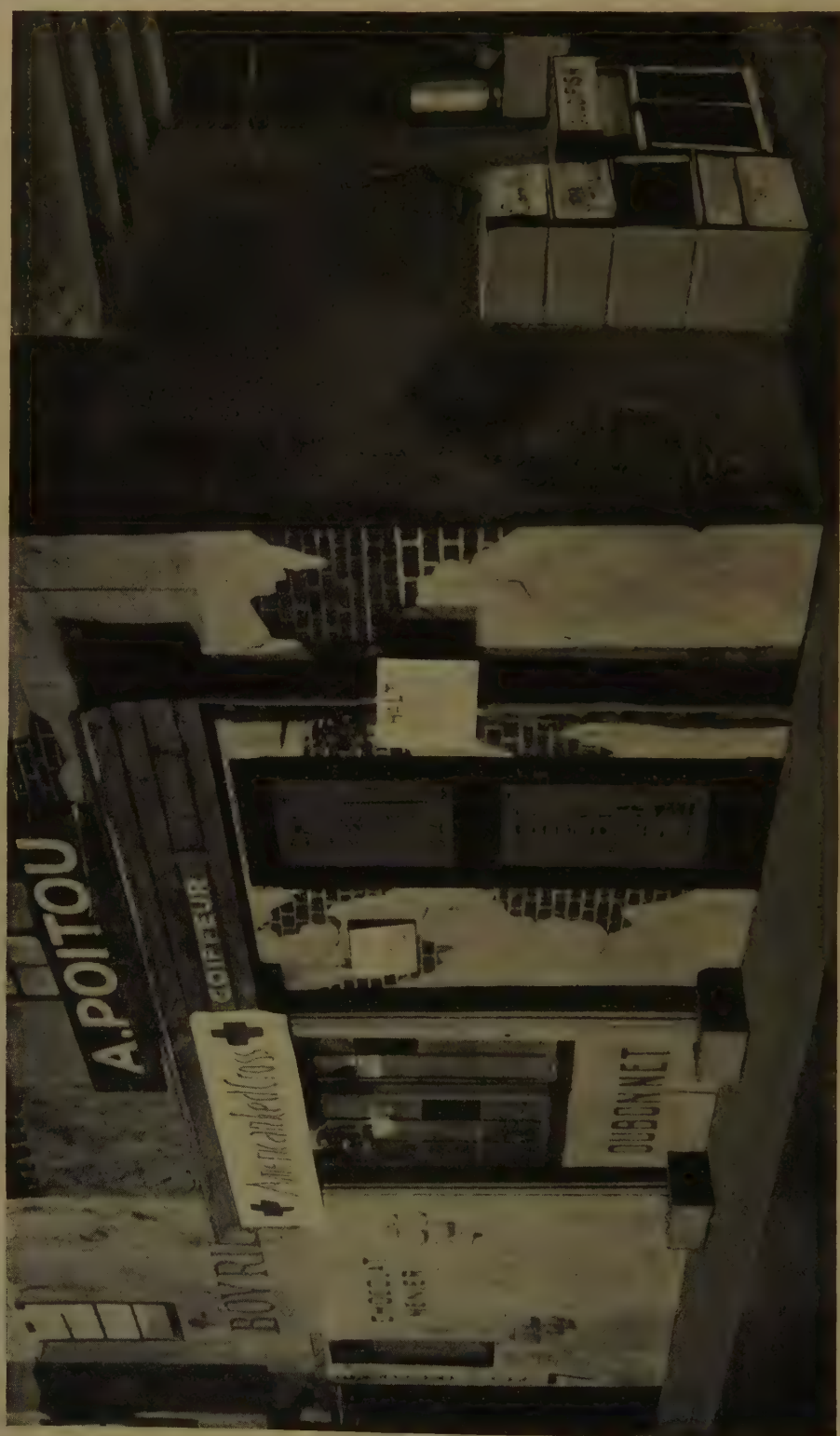
The corporation subscribed for \$5,000,000 of Liberty Loan bonds and \$2,990,750 of Victory Loan bonds, while its employees' subscriptions amounted to \$3,000,000 addi-

tional. The St. Joseph County, Indiana, quota of every loan was put "over the top" by the corporation.

On January 16, 1922, the Administration Building of the corporation at South Bend was utilized by the citizens of South Bend in giving a reception to 10,000 ex-service men and members of their families. Architects and contractors reproduced a French village and battlefield with trenches and barbed wire on the ground floor. Red Cross overseas girls served refreshments in canteens and throughout the building. The National Commanders of the American Legion, Army and Navy Union and Veterans of Foreign Wars were in attendance, while the Studebaker band of one hundred pieces and another band provided music. The building was besieged, and hundreds were unable to gain admittance. The admission fee for all but ex-service men and their families was five dollars, and \$6,000 was raised for their relief fund. It was a decidedly successful and unique occasion.

From the sordid standpoint of profits, our war business with the United States Government was unattractive, netting us less than 5% on sales, whereas manufacturers in the metal working industries with great investments in real estate, plants, raw material and work in progress (unmarketable things), must receive from 10% to 15% on sales to remain healthy. The corporation neither wanted nor realized such profits from the war. It considers its war record the brightest spot in its history.

The commercial progress of the corporation in the two years before the United States entered the war broke all



MODEL OF FRENCH VILLAGE

records. It participated up to its capacity in the industrial and general prosperity, then pervading the country, by selling 46,845 cars in 1915, and 65,885 cars in 1916, as compared with 35,460 in 1914, its best previous record. Sales of horse-drawn vehicles and harness showed big increases. Manufacturing economies and labor efficiency, which reduced the men hours per car produced about 50%, as compared with 1913, resulted in big increases of profits in both years.

All bank loans were paid off in 1915 and over \$2,000,000 of the serial gold notes were purchased in the open market and canceled, while the balance of \$2,305,500 of such notes, which could not be purchased, were called for redemption at \$101½ as of March 1, 1916, and the cost thereof with deferred charges covering commissions and discount of \$215,583.52 was charged to surplus; \$1,317,906.63 was credited to special surplus account and 12,150 shares of preferred stock were purchased in the market and canceled in anticipation of charter requirements, thereby giving this account a net credit of \$2,548,654.17. Coupled with the splendid profits, these acts made the financial position of the Corporation quite strong and secure, and paved the way for inaugurating dividends on the common stock. Consequently on May 4, 1915, the directors declared an initial quarterly dividend of 1¼% and thereby established a 5% rate. Continued good results actuated them on November 2nd to increase the rate to 6% and declare a 1% extra dividend. Again, on Nov. 3, 1915, for



the same reasons, common stock was placed on a 10% basis and this rate was continued until the summer of 1917, when it was reduced to 4%.

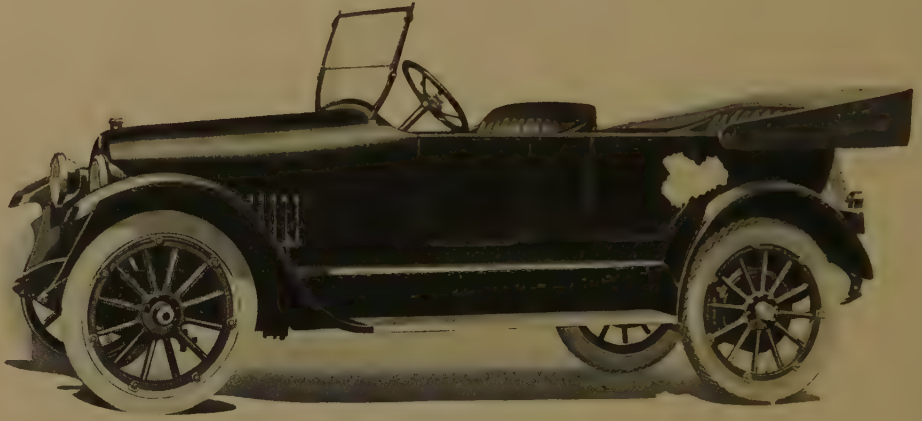
The inadequacy of the corporation's plants to meet fully the demands for Studebaker automobiles caused the management considerable anxiety. Working day and night and purchasing many parts outside the Detroit plants could produce but 65,000 to 70,000 cars annually, and sales were limited accordingly. Several rival manufacturers were expanding plants and increasing capacity on a broad scale, and the management was convinced that similar expansion was necessary if the corporation expected to develop and aggressively maintain its position in the industry. In the spring of 1916, therefore, it determined to build a large modern automobile plant at South Bend for the production of a smaller car to supplement the heavier models built at Detroit. Better manufacturing conditions and railroad facilities existed at South Bend, which had always been the home of Studebaker, and it was the logical place for the new plant. Plans were drawn for a plant capable of producing 700 cars daily, when finally completed. Buildings were arranged so that construction by units could be made from year to year without serious disturbance to the machinery and production layouts. The final completion was to be spread over several years. On December 12, 1916, ground was broken for 40% of the new forge shop, 25% of the new machine shop, and 40% of the new power house, but the United States entered the war as these buildings were

nearing completion, and consequently, they were equipped for forging and machine work on orders for the Ordnance Department, previously mentioned. The financial prosperity and plant expansions of the corporation in the years of 1915 and 1916 placed it in strong position for the war service that was just ahead of it, as heretofore described.

The sales, net profits, dividends, and surplus of the four-year war period are shown in the following table:

Dec. 31	SALES		NET PROFITS		DIVIDENDS			Surplus
	No. Cars	Amount	Amount	Per- cent Sales	7% Pref. Stock	Common		
						Percent	Amount	
1915	46,845	\$ 56,539,006.23	\$ 9,067,425.28	16.0	\$ 830,445	5	\$1,396,580	\$ 6,840,400.28
1916	65,885	61,988,594.09	8,611,245.08	13.9	767,550	10	3,000,000	4,843,695.08
1917	42,357	50,147,515.75	3,500,740.92	7.0	767,550	7	2,100,000	633,190.92
1918	23,864	52,087,997.00	3,884,194.51	7.5	767,550	4	1,200,000	1,916,644.51
Total	178,951	\$220,763,113.07	\$25,063,605.79	11.3	\$3,133,095	26	\$7,696,580	\$14,233,930.79

To keep the product abreast of the times and fully worthy of confidence, the management seized the opportunity that the recess of the war gave its engineering department, to develop, design, test, and get ready for production a brand new line of automobiles. The Chief Engineer and his staff, assisted by consulting engineers, began the design of these new cars in May, 1917, under instruction and guidance of the management. Three different models were designed, and three experimental models were built. On September, 15, 1917, at 7:00 A.M., according



SPECIAL-SIX TOURING CAR



BIG-SIX TOURING CAR

to promise, these three cars were driven off the Detroit boat at the Buffalo dock, ready for a grilling test. The author joined the engineers, and the cars were driven to Albany, thence north to Montreal, east to Quebec, back to Montreal; thence through New York and Pennsylvania into the Alleghenies; thence northwest through Ohio and Michigan, for over 20,000 miles over mountains and hard and soft roads, sandy, gumbo, and bad roads with chuck-holes were deliberately selected. In December, the three cars were put on the Chicago Speedway and run continuously 30,000 miles, which completed the 50,000 mile scheduled test. Thirty mechanics were housed at the track, and drivers alternated in eight hour shifts day and night. Zero weather was experienced, frequent snowdrifts were plowed through, or cleared away if that was impossible. The BIG-Six frequently made 800 miles in twenty-four hours. Logs were kept and daily reports of mileage, gasoline and oil consumption and repairs, were made to headquarters. When each car completed its 30,000 miles, it returned to the factory. The SPECIAL-Six with 79,857 miles to its credit, and the BIG-Six with 83,566 miles, are now in the Studebaker Museum at South Bend. Limited production of the new cars was started in December, 1917, at Detroit plants, and show models were exhibited for the first time at the New York automobile show in January, 1918. Because of the corporation's limited production in 1917, its 3,500 dealers in the United States were maintaining their business with considerable difficulty, and it was incum-



SPECIAL-SIX COUPE



SPECIAL-SIX SEDAN



bent upon the corporation to contribute to their support as long as possible. Accordingly, modest production schedules were adopted for the new models, but even these could not be made because of the growing pressure of the war service. Only 18,274 of these new models were produced in 1918. The dealers' organization would have been dissipated had not the armistice ended the war.



ADMINISTRATION BUILDING, SOUTH BEND, AND INTERIOR VIEWS

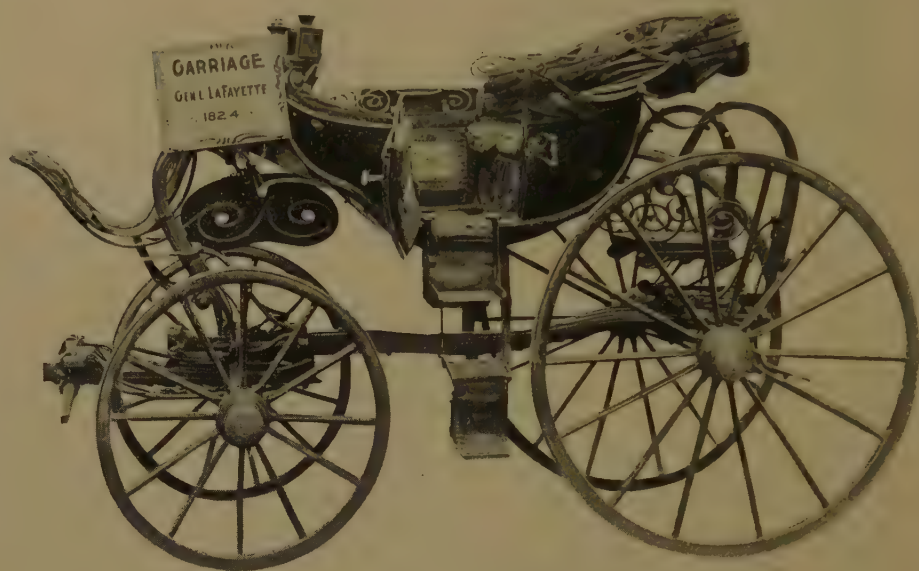


## Chapter 8

### *Post-War Period*



THE post-war period covers the five years from 1919 to 1923, inclusive. During October, 1918, it became apparent that the war was over, and the management, therefore, began planning to resume construction of the new plant at South Bend and aggressively expand the manufacturing facilities of the corporation immediately the armistice was signed. The corporation was again a borrower to the extent of \$9,000,000; its war order obligations against the United States and British Governments of over \$8,000,000 were uncertain of prompt settlement, and new capital was therefore necessary. The directors were asked, at their meeting on November 6, 1918, to authorize the raising of \$15,000,000 fresh capital. Such authority was given the Executive Committee, which arranged for the money by selling \$15,000,000 ten-year 7% Serial Gold Notes, dated January 1, 1919, and the proceeds were received on that day. Ground was broken March 19th, and the great expansion at South Bend was under way.



GENERAL LAFAYETTE'S CARRIAGE



PRESIDENT ABRAHAM LINCOLN'S CARRIAGE



The nation-wide demand for motor cars in 1919 found the corporation well fortified and alone in the industry with new models of up-to-date design. Although the problem was one of production, and not selling, it was a difficult and protracted task to convert the plant layouts, because war work was continued in a limited way for six weeks after the armistice was signed, and government inspectors absorbed more time in releasing equipment. Afterwards the physical work of the change was quite extensive. However, 16,365 cars were built by the Detroit plants in the first six months, and 22,170 were built in the last six. The new cars were a decided success, and the vehicle business was also very good.

Profits were large, and by the fall of this year, as a result of these facts and the boom in business, the common stock of the corporation was selling above \$140 per share. It became apparent from this situation that the serial note issue just put out could be easily capitalized by the sale of a like amount of common stock. Consequently, on October 29, 1919, the directors called a special stockholders' meeting to increase the authorized common stock from \$30,000,000 to \$75,000,000. On Nov. 24th the stockholders approved the increase and in December \$15,000,000 of the newly authorized stock was sold at \$105 per share and the proceeds were used to call and retire the \$15,000,000 serial gold notes as of December 31st. A funded debt, one year old, was thus capitalized and the outstanding common stock was increased to \$45,000,000.





This carriage was used by General Grant during his last term as President of the United States, from 1873 to 1877, and was presented to Studebaker Bros. Mfg. Company by his son, Gen. Frederick H. Grant, and family, to be preserved as a relic of historic days.

PRESIDENT GRANT'S CARRIAGE

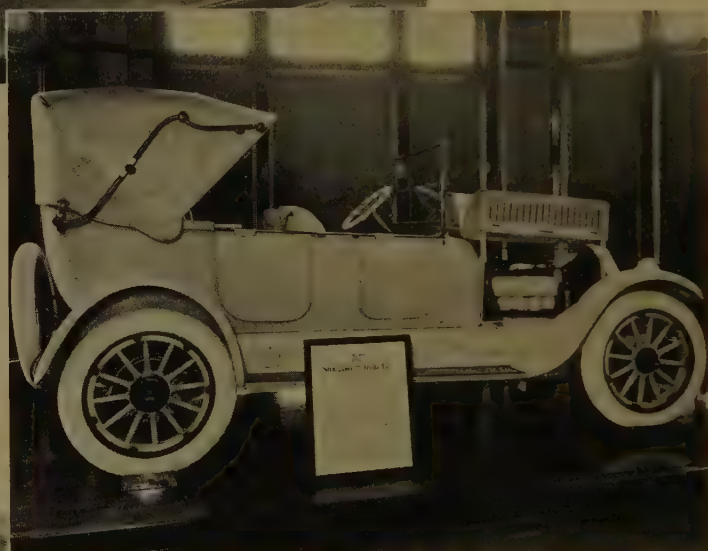


PRESIDENT HARRISON'S CARRIAGE

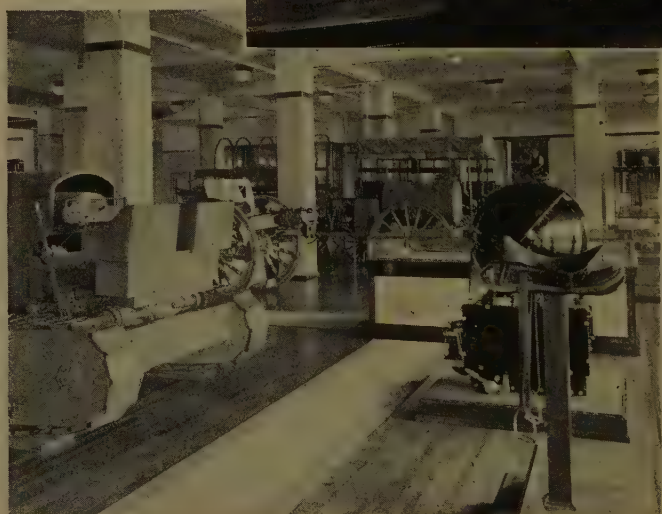
Availing itself of the opportunity afforded by the prosperous condition of business in 1919, the corporation discontinued the manufacture of its complete line of buggies, carriages, harness, and all horse-drawn vehicles except farm wagons and farm trucks. In 1920 these latter products were also discontinued. The liquidation was made commercially by A. B. Thielens, Sales Manager of the Vehicle Division, through regular trade channels, and inventory losses were kept at a minimum. These losses, together with those resulting from the sale and scrapping of machinery and equipment, unavailable for automobile work, were charged off to surplus account. Much of the wood-working machinery and all the wood-workers and manufacturing forces were ideally suited to the manufacture of automobile bodies. The factory buildings were likewise suitable for this purpose, and hence the switch was made by the Manufacturing Department with little disturbance and small expense. South Bend vehicle plants thereby became wholly devoted to the manufacture of automobile bodies, springs, forgings, stampings, and other automobile parts, with resultant savings greatly exceeding the profits of the vehicle business. The last farm wagon and the last buggy made in the South Bend plants now occupy honorable positions in the Studebaker Museum beside the "covered wagon" made by John Studebaker in 1830 and the buggy made by H. & C. Studebaker in 1857, honored products of the days of yesterday. Other horse-drawn vehicles and relics in this Museum include the LaFayette carriage used by Marquis de LaFayette in



GOLD CHASSIS  
EXHIBITED AT  
AUTOMOBILE SHOW,  
1916



GOLD CAR  
EXHIBITED AT  
AUTOMOBILE SHOW,  
1917



MINE ANCHORS  
AND BRITISH TRACTOR  
IN FOREGROUND

GLIMPSES OF MUSEUM



## POST-WAR PERIOD

1824-25 upon his visit to the United States; the Lincoln carriage used by the martyred President the night of his assassination in Washington; the Grant carriage used by General Grant when he was President; and the Harrison carriage built by Studebaker and used by President Harrison for many years. The gold-plated chassis and the gold car made by Studebaker in 1916-17 and exhibited in New York Shows and sent around the world, the first Studebaker LIGHT-SIX made in the new plant, the veteran BIG-SIX made in 1918 with a world record of 490,000 miles to its credit, and samples of the war products made by the corporation, are also exhibited in this Museum, where visitors to South Bend are always welcome.

On August 5, 1919, the directors approved and furnished stockholders copies in pamphlet form of the co-operative plans for the benefit of labor, which have since continued in successful operation and are explained elsewhere. The Citizens' Homes Company, a subsidiary company, with \$1,000,000 of capital stock, was organized to build homes in South Bend for employees of the new plant. Considerable real estate was purchased and 206 houses were constructed at a total cost of \$2,266,832.73. The houses were sold to employees at about 25% below costs, which were unduly high, and are being paid for on the installment plan.

The year of 1920 was a record breaker for the corporation in net sales, in net profits, and in the completion of the construction program of the new plant at South Bend to a capacity of 200 cars per day. On April 30, 1920, the



"GRANDDADDY" BIG-SIX. WORLD'S RECORD 490,000 MILES IN 5¼ YEARS. MANUFACTURED APRIL, 1918



first Studebaker LIGHT-Six was turned out by the plant, and on June 26th, a big celebration was held in South Bend in honor of the event. A parade of 7,000 Studebaker employees, led by this car and the Studebaker military band of 100 pieces, proceeded to Springbrook Park, where 30,000 employees and members of their families enjoyed a barbecue, circus, athletic events, and fireworks. In the evening a banquet to 730 citizens of South Bend and vicinity was given in the dining room of the new plant, and a company of out-of-town guests was present.

A retail store, four stories and basement, 65x105 ft., was erected in Brooklyn, New York, this year, and a service building, four stories, 191x173 ft., of reinforced concrete was erected in the same city the following year. Retail stores in New York City, four stories, 125x105 ft., and in Cleveland, three stories, 180x55 ft., were provided on leased ground. Service buildings in New York, six stories, 200x175 ft.; at Cleveland, three stories, 148x143 ft.; and at Detroit, four stories, 375x74 ft., were also provided. The corporation maintains retail branches in all these cities, as well as at South Bend and Indianapolis.

On May 5, 1920, the directors capitalized part of the surplus profits which had been invested in plant expansion by issuing a stock dividend of \$15,000,000 to the common stockholders and thereby increased the outstanding common capital stock to \$60,000,000.

With Plant No. 2 completed, Plant No. 1 devoted to automobile work only, and Plant No. 3 at capacity



ONE OF THE STREETS IN STUDEBAKER PLACE



CITIZENS' HOMES COMPANY DEVELOPMENT



NEW YORK RETAIL STORE, BROADWAY AT 70TH STREET



NEW YORK SERVICE BUILDING, 131ST STREET NEAR BROADWAY





BROOKLYN RETAIL STORE



BROOKLYN SERVICE BUILDING



CLEVELAND RETAIL STORE



CLEVELAND SERVICE BUILDING





DETROIT RETAIL STORE



DETROIT SERVICE BUILDING



EMPLOYEES' PARADE, JUNE 26TH, 1920





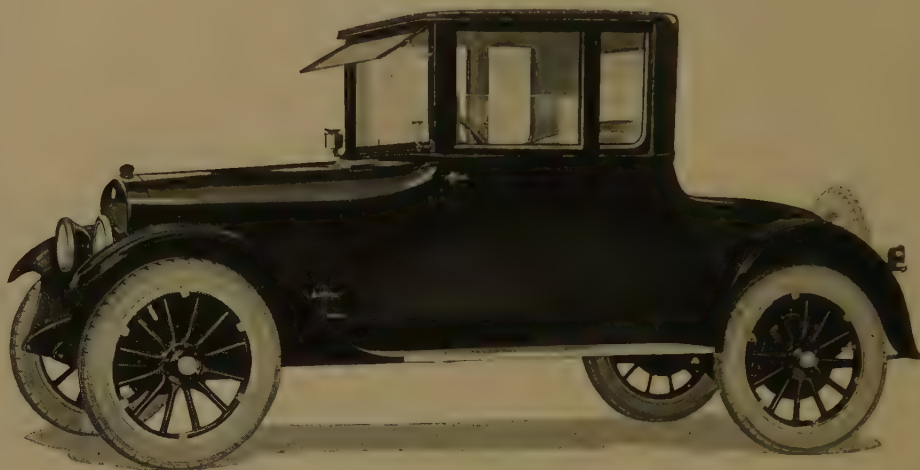
1924 MODEL—LIGHT-SIX 3-PASSENGER ROADSTER



1924 MODEL—LIGHT-SIX TOURING

production, the year of 1921 was another record breaker in number of cars, and in net profits. Despite the depression which set in about the middle of the year, and which affected the automobile industry to a marked degree, the corporation escaped unhurt. By selling 66,643 cars, as against 51,474 in 1920, it increased its business 29.5%, whereas the sales of the industry as a whole, excepting Ford, actually decreased 45%. Stated otherwise, Studebaker sales were 129.5% of the previous year, while those of the industry, except Ford, were but 55%. A bigger increase, however, was to follow in the year of 1922, when sales leaped to 110,269 cars, a sheer gain of 65.5% over the previous year, with net profits of \$18,086,195.77, an increase of 73.7%. The common stock was, therefore, on July 31st put on a 10% basis, and 1½% extra was declared to adjust the first six months to the 10% rate. The plant expansion had permitted the production of 440 cars per day during the early part and 600 during the latter part of the year. On December 29, 1922, the directors again capitalized part of the surplus invested in plant expansion by declaring a stock dividend of \$15,000,000 to the common stockholders. This issue raised the total common capital stock outstanding to \$75,000,000.

Increases were again established for the fifth successive year in number of cars sold, and net profits, in the year of 1923, because plant expansion made possible the production and sale of 145,167 cars, which was an increase of 31.6% over 1922. The plants maintained an output of



1924 MODEL—LIGHT-SIX 2-PASSENGER COUPE-ROADSTER



1924 MODEL—LIGHT-SIX 5-PASSENGER SEDAN



# POST-WAR PERIOD

635 cars daily for many months, but the demand was considerably greater throughout the spring and summer. The sales, net profits, dividends, and surplus of the five year post-war period are shown in the following table:

Dec. 31	SALES		NET PROFITS		DIVIDENDS			Surplus
	No. Cars	Amount	Amount	Percent Sales	7% Pref. Stock	Common		
						Percent	Amount	
1919	39,356	\$ 66,383,307.34	\$ 9,312,283.88	14.0	\$ 748,475	7	\$ 2,100,000	\$ 6,463,808.88
1920	51,474	90,652,362.56	9,822,054.04	10.8	710,150	7	3,937,500	5,174,404.04
1921	66,643	96,690,643.83	10,409,690.80	10.8	686,000	7	4,200,000	5,523,690.80
1922	110,269	133,178,881.00	18,086,195.77	13.6	673,750	10	6,000,000	11,412,445.77
1923	145,167	166,153,683.28	18,342,222.95	11.0	638,750	10	7,500,000	10,203,472.95
Total	412,909	\$553,058,878.01	\$65,972,447.44	11.9	\$3,457,125	41	\$23,737,500	\$38,777,822.44

No other automobile manufacturer in the United States, except Ford, had a record of unbroken sales increases during the post-war period. None other had a record of such *big percentages* of increases. Studebaker stood alone in this respect. What was the reason? The answer lies in the product and satisfied owners. No business can continuously grow and prosper without the constant confidence and respect of the public, both for its product and its management. No business has an inherent right to the public's money, but must deserve and win it daily by exchanging honest value and faithful service.

A general balance sheet of the corporation and its subsidiary companies, as of the date of its incorporation, the close of the war period and January 1, 1924, is appended.



1924 MODEL—LIGHT-SIX 5-PASSENGER COUPE



1924 MODEL—SPECIAL-SIX 2-PASSENGER ROADSTER

# POST-WAR PERIOD

<i>Assets</i>	<i>Jan. 1, 1911</i>	<i>Dec. 31, 1918</i>	<i>Dec. 31, 1923</i>
Cash . . . . .	\$ 6,243,619.69	\$ 2,875,005.03	\$ 9,955,791.46
Receivables . . . .	5,566,977.42	14,467,729.51	8,603,172.52
Investments . . . .	742,513.29	1,777,120.72	2,857,217.29
Inventories . . . .	14,643,419.92	17,555,796.85	26,674,925.39
Deferred Charges . .	251,358.52	268,918.61	529,428.38
Quick Assets . . .	\$27,447,888.84	\$36,944,570.72	\$ 48,620,535.04
Plants and Property	9,811,990.34	17,922,076.21	53,996,468.55
Good Will, Trade Marks, etc. . . .	19,807,276.64	19,807,276.64	19,807,276.64
Total . . . . .	\$57,067,155.82	\$74,673,923.57	\$122,424,280.23
<i>Liabilities</i>			
Notes Payable . . .	\$10,257,236.69	\$ 9,525,000.00	.....
Other Payables . . .	3,309,919.13	4,602,549.43	\$ 14,290,546.40
Current Liabilities	\$13,567,155.82	\$14,127,549.43	\$ 14,290,546.40
Preferred Stock . . .	13,500,000.00	10,775,000.00	8,600,000.00
Common Stock . . .	30,000,000.00	30,000,000.00	75,000,000.00
Surplus . . . . .	.....	19,771,374.14	24,533,733.83
Total . . . . .	\$57,067,155.82	\$74,673,923.57	\$122,424,280.23

At the close of the seventy-first year of continued operations of the Studebaker business, and of the thirteenth year of the corporation, the following summary of results for the latter period are interesting:

Total plant and property investment, excluding housing development, December 31, 1923, \$52,472,636.41 of which \$42,660,646.07 was expended in the past thirteen years, after deducting \$8,194,517.06 charged off for depreciation

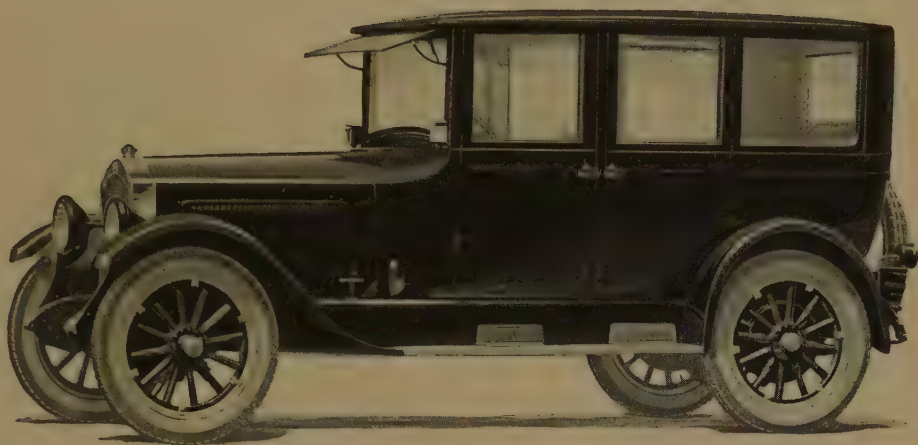


1924 MODEL—SPECIAL-SIX 5-PASSENGER TOURING



1924 MODEL—SPECIAL-SIX 5-PASSENGER COUPE





1924 MODEL—SPECIAL-SIX 5-PASSENGER SEDAN

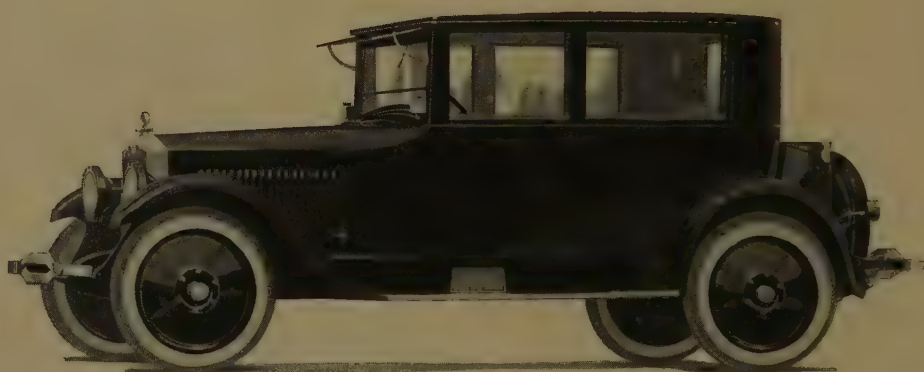


1924 MODEL—BIG-SIX 7-PASSENGER TOURING





1924 MODEL—BIG-SIX 5-PASSENGER SPEEDSTER



1924 MODEL—BIG-SIX 5-PASSENGER COUPE

and demolition. During this period, \$30,126,279 was spent for repairs and maintenance of property and charged against operating expenses.

Total 7% cumulative preferred stock originally outstanding, \$13,500,000, reduced to \$8,600,000 by amortization, as required by the charter.

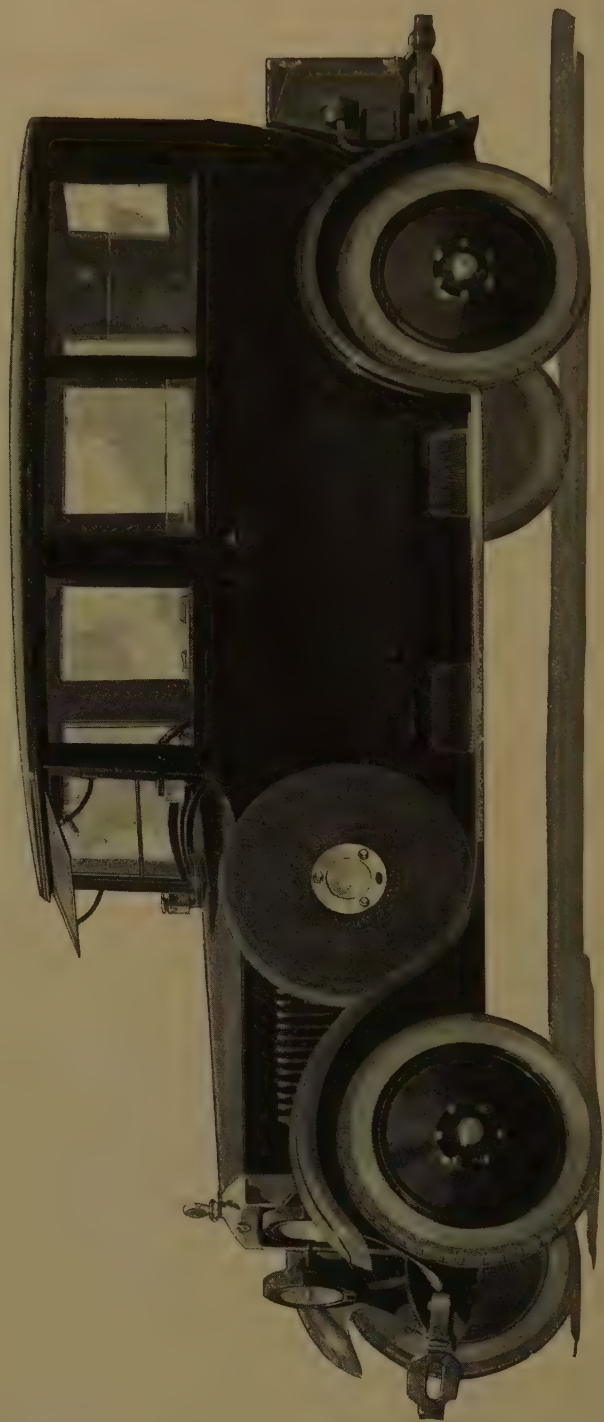
Total common stock outstanding increased from \$30,000,000 to \$75,000,000 by the sale of \$15,000,000 of new stock at \$105 per share, and the issuance of \$30,000,000 of stock dividends.

Total fresh capital received by the corporation in thirteen years, from the sale of common stock, less retired preferred stock, \$10,500,000.

Actual net assets of the corporation increased from \$23,692,723.36 to \$88,326,457.19, of which plant and property account increased from \$9,811,990.34 to \$52,472,636.41, working capital from \$13,880,733.02 to \$34,329,988.64, plus Citizens' Homes Company investment \$1,523,832.14.

Total sales for the thirteen years were \$922,659,339.01, upon which net profits and other income amounted to \$101,217,320.22, or 11.0% of sales, after payment of \$13,257,859.99 income, excess profits, tax to the United States and Canadian governments.

The net profits were disposed of by the payment of dividends on the 7% cumulative preferred stock, amounting to \$9,999,920; on the common stock of \$31,434,080, which with charge-offs and surplus adjustments amounting



1924 MODEL—"BIG-SIX" 7-PASSENGER SEDAN

## POST-WAR PERIOD

to \$5,249,586.39, left surplus profits of \$54,533,733.83, or 53.9%, which were retained in the business for working capital and made possible the great plant expansion program elsewhere described.

Total number of Studebaker cars produced and sold in thirteen years 713,808, of which 480,000 are estimated to be at present in operation.

Average number of employees in 1923—21,199, as compared with 11,415 in 1911.

Average wages earned by all factory employees in 1923, including foremen, but not production superintendents, production managers and executives, \$1,712 per employee, as against \$650 average in 1911, an increase of \$1,062 or 163.4% per employee.

Salary payroll including factory and commercial executives and clerical force, \$5,298,235, an average of \$2,187.55 per employee.

Number of stockholders December 31, 1923, 1,108 preferred, and 7,639 common.

The corporation enters its seventy-second year confident that future growth will exceed that of the past. It is committed to the production of high quality products only, for those who appreciate the extraordinary values made possible by great physical resources and manufacturing economies.





DR. C. A. LIPPINCOTT



C. S. SLACK



J. B. WHITE





## Chapter 9

### *Profit-Sharing and Co-operative Plans*



**B**IG business in the United States today is owned by the people. Millions of shareholders in every walk of life own a great majority of the capital stock of perhaps 95 % of the big railroads and corporations. Our savings banks and big life insurance companies, which own perhaps 75 % of the outstanding bonds of these railroads and corporations, are in turn owned completely by the people. The directors who control big business and the officers and managers they employ to operate it are but trustees and servants of the stockholders. Rarely indeed do the combined stock holdings of directors, officers, and managers amount to 25 % of the outstanding stock. It becomes apparent, therefore, that capital, in this country at least, represents the savings of the people, and directors and officials cannot play loose with it.

A general feeling has grown up in the past two decades, however, among bankers, economists, and industrial leaders, that profit-sharing systems are advantageous to



STUDEBAKER MILITARY BAND, DETROIT DIVISION  
T. A. MILLER, MUSICAL DIRECTOR, IN OVAL

stockholders in increasing enthusiasm, loyalty, and efficiency in management and labor, and consequently, numerous plans of different kinds are now in effect in different institutions, and widespread adoption is in sight. The presidents and trustees of savings banks and big life insurance companies, who are the custodians of the property of and the advisers of the millions of security holders and insurance policy owners, almost unanimously favor profit sharing, because they believe it protects and fosters existing savings and encourages new savings. It is in their opinion not only economically wise but sociologically desirable in the United States, where the number of industrial workers nearly equals and the value of the output of industry is over three times that of agriculture, and where the machinery age, with the big business it begets by mass production, presents a new factor in our social life. Everybody knows that our industrial workers enjoy higher wages, live better, and are more prosperous than the industrial workers of any other country in the world. This condition has existed in a marked degree *only since the advent of big business*, which was made possible by American genius for developing labor-saving machinery and mass production, with its economical costs, that permitted the workers themselves to become great consumers of their own production, and American manufacturers to meet the competition of the world. Industrial workers have prospered because big business has prospered and could therefore pay big wages. *Big business has prospered because it supplies to*





M. P. KELLY, LEADER



STUDEBAKER MILITARY BAND, SOUTH BEND DIVISION

*mankind the products of industry at prices which small business can never equal.* The domination of American mass-production products, not only in home markets but in the markets of the world, despite the high wages we pay, is proof of the economic superiority of big business over small business. The principle that the cost of any manufactured article diminishes proportionately with the quantity produced is unassailable. The best interests of the country are, therefore, fostered by the healthy operation and development of big business and mass production. People of the United States must be brought to the realization that big business, lawfully conducted, is the biggest asset of the nation because it is the greatest source of its prosperity and the greatest conserver of its savings. Business is, simply, organized society working to produce and distribute the things it needs. The state of business determines the state of employment, prosperity, and happiness, and therefore, the continuous operation of business at its closest approach to capacity will insure the greatest possible employment, prosperity, and happiness to all of us.

Profits do not accrue from business except when it is successfully conducted. A big step towards successful conduct is afforded by ample capital, adequate facilities, efficient management, and capable labor, but these do not insure success when the combined concerns in a given industry have a production capacity exceeding the consumptive demand, or if the article produced is not one of common use. These latter conditions beget cut-throat competi-





STACEY ADAMS, CONDUCTOR



STUDEBAKER SYMPHONY ORCHESTRA, DETROIT EMPLOYEES

tion, and often prevent success even by concerns which are individually competent. Where there are no profits to divide, there can be, of course, no profit sharing, and this is the rock upon which many profit-sharing plans have split. Profit-sharing plans are, however, susceptible of adoption by successful business, and they have been known to convert unsuccessful business into success. They are rewards held out over and above the regular salary or wage to stimulate management and labor to the exercise of every capacity and energy they possess. Capital is undoubtedly entitled to reasonable returns upon the amount of its investment, for the salaries and wages it pays management and labor, but these salaries and wages must be liberal, and labor must be furnished healthful working conditions and decent treatment, before dividends are paid to capital or bonuses to management. It should be the responsibility of capital and management to thus first provide for labor. Over-production, cut-throat competition, failure of either management or labor or both to work efficiently, or failure of capital to provide adequate facilities for economical production, and other causes may work against the application of this principle. The struggle to correct such conditions involves the very character and capacity of humanity itself to engage in competitive business, but the ideal is a worthy aspiration. Assuming that profit sharing is adopted, it becomes the duty of management, in consideration of the salary it receives, first to pay labor liberal wages, to provide it healthful working conditions and decent treat-

ment. It is the duty of labor to render loyal, efficient work. Thereafter, management must provide capital a reasonable return on its investment. If there be surplus profits after thus providing for labor and capital, they become subject to profit sharing by capital, labor, and management. This is the basis upon which most profit-sharing plans rest, but no common plan of distribution exists. Hundreds of big business concerns and many small ones have individual plans.

A problem which immediately presents itself is whether labor would prefer to take the risk of profits accruing and perhaps be disappointed if none materialized, or would rather receive wage dividends, stock-purchase concessions, and other rewards for continuous service before either capital or management participates, and regardless of whether profits are eventually realized. The advantage to labor of this latter preference is that it receives its rewards even though no profits are made, as sometimes happens. Questions also arise as to whether the amount of surplus profits probable of realization is large or small, and what percentages thereof should be distributed. Announcement of distribution must be made at the beginning of the year when results cannot be foreseen, and disappointment results sometimes if the final distribution is below expectations. Labor is relieved of these uncertainties when wage dividends, stock-purchase concessions, and other rewards are paid it, regardless of profit and loss results.

The Studebaker Corporation believes that capital, management, and labor are mutual partners in business, and

## PROFIT-SHARING AND CO-OPERATIVE PLANS

each fundamental to success, and in consequence of this belief, it pursues a liberal policy toward its organization by compensating its members, first with salaries and wages that are at least as high, and often higher, than market rates, and second, by rewards to labor for continuous service and by profit sharing to management. The directors adopted a profit-sharing plan for management in 1914, and early in 1917, a wage dividend for labor. On September 1, 1919, it increased the wage-dividend rates, granted vacations with pay to factory employees, and adopted stock-purchase and pension plans for labor. Management was defined as comprising senior and junior executives, including managers of departments and bureaus in the commercial division of the business, and production managers, superintendents, and foremen in the manufacturing department; in other words, every executive or employee holding positions of authority which involved the management of the property and employees of the corporation, the spending of its money, or the commitment of it to an obligation. Labor was defined as comprising the great body of employees without responsibility other than the performance of work laid out by the management. Capital was defined as the investment of the stockholders in the business.

The first profit-sharing plan was adopted by the directors for the year of 1914, wherein it was provided that the net profits must equal 7% dividends on the preferred stock, 3% amortization of preferred stock, and 5% upon outstanding





BOWLING



BOWLING



INDOOR BASEBALL



BASKETBALL



HOCKEY



common stock, before anything would accrue to the profit-sharing fund. If the net profits exceeded the amounts thus provided as reasonable returns to stockholders, 12% of the first \$1,000,000, 14% of the next \$1,000,000, and 15% of the excess over \$2,000,000 of surplus net profits would constitute the fund. Changes were made in the returns to stockholders for 1916 by increasing the provision for the common stock to 6% and by reducing the percentages upon excess profits to 10% of the first \$2,500,000, 12½% of the second \$2,500,000, and 15% of all over \$5,000,000. In 1920, 7% was provided for the common stock, and the percentages of surplus profits making up the fund were reduced to 5% on the first \$1,000,000, 6% on the next \$1,000,000, 7% on the next \$1,000,000, 8% on the next \$1,000,000, 9% on the next \$1,000,000, and 10% on all over \$5,000,000.

The task upon management since 1920 has been to make a return to stockholders of 7% dividends on preferred stock, 3% for amortization thereof, and 7% on outstanding common stock, including \$30,000,000 of stock dividends, before it should receive any profit sharing. Net profits were sufficiently large, however, to return management liberal participation even with percentages reduced to the 5-10% scale. The effect has been that stockholders have received more than 90% and management less than 10% of the excess net profits.

The participants in the profit-sharing fund are divided into seven or eight groups covering different classes of positions, and the amount of the fund is split into a like number



SOUTH BEND BASEBALL TEAM



ANNUAL SHOW

of parts. Group No. 1, for example, contains several of the higher officials, Group No. 2 perhaps 10 of the next in importance, Group No. 3 perhaps 20 of the next, and so on down to the last group which contains the junior members of management. The fund is divided between participants in each group on a per capita basis, and is paid in cash to the last two. The other groups receive 50% cash and 50% in common stock which is held in trust by the corporation and delivered to them 25% after the first year, 25% after the second year, and 50% after the third year, provided they remain continuously in the employ of the corporation. If they resign or are dismissed for cause, they forfeit all stock held by the corporation. If they die, the trustee stock is delivered to their legal representative.

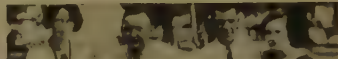
Certain parts of the printed plan are quoted as a matter of interest:

In consideration of the salaries it receives, management must earn certain returns on the investment of stockholders before benefits shall accrue under this plan.

No beneficiary of the co-operative plans (anniversary check, stock-purchase, vacation, pension, and life insurance plans), nor employee holding a contract covering special compensation, in the nature of commissions or participation in profits, shall participate in the Bonus Plan for Management, without the approval of the directors.

In case you are discharged or resign during the year of 1923, you shall automatically forfeit all rights of participation in the bonus fund of this year, but if you are released on account of curtailment in business or shut-downs in the factory, and not on account of lack of efficiency, you shall receive a pro rata distribution of the fund of the current year, and the full amount of common stock held for your account from previous years, if any.





DETROIT EMPLOYEES' ANNUAL PICNIC  
SUGAR ISLAND, 1923



## PROFIT-SHARING AND CO-OPERATIVE PLANS

The position you hold qualifies you to participate in the Bonus Plan for Management for this year, but this statement of intention concerning a voluntary and contingent distribution of a part of the profits of the corporation does not in any way constitute a contract on the part of the corporation to make such distribution, nor alter or affect any of its contract relations with you or other employees. Moreover, the corporation reserves the right, at its discretion at any time, to change or withdraw the plan as a whole or with respect to any individual participant. Unless you accept this offer of participation subject to these reservations, you must at once notify the Treasurer in writing, as in the absence of his receipt of such notification, we will understand that you accept participation on these conditions.

The following table shows the number of participants and payments to management for the past ten years:

<i>Dec. 31</i>	<i>No. of Participants</i>	<i>Amount of Fund</i>	DISTRIBUTION	
			In Cash	Held in Common Stock
1914	271	273,447.85	175,061.87	98,385.98
1915	333	999,326.78	611,426.18	387,900.60
1916	392	921,224.31	542,382.01	378,842.30
1917	324	76,911.64	76,911.64	None
1918	328	130,525.00	100,691.67	29,833.33
1919	376	699,051.38	443,167.72	255,883.66
1920	416	716,870.06	443,712.56	273,157.50
1921	426	746,142.28	463,084.12	283,058.16
1922	434	1,542,149.30	910,877.44	631,271.86
1923	450	1,477,237.27	864,105.74	613,131.53
Total	√	7,582,885.87	4,631,420.95	2,951,464.92

The co-operative plans for labor as adopted by the corporation are not strictly profit-sharing plans, because payments under them are a fixed expense of operating the



CHAMPIONS

12 - 1

*Doc*



*Eugene*



*James*

RUNNERS - UP

10 - 3



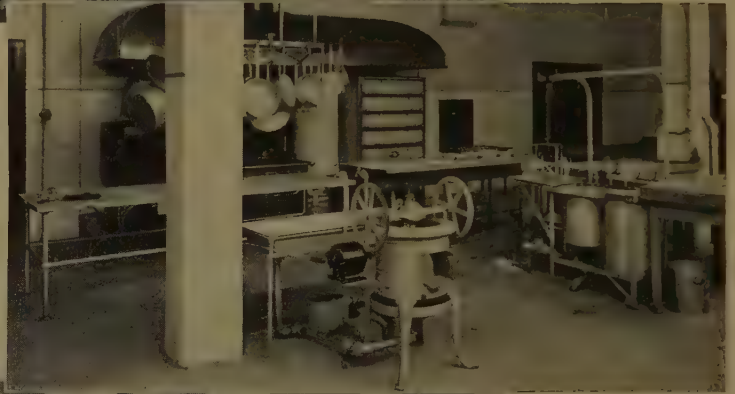
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DETROIT BASEBALL TEAMS, 1923

business, are not dependent upon the profits of the corporation, and must be paid before dividends can be paid to stockholders or profit sharing to management. It is the fixed policy of the corporation that the rates of wages paid to its employees shall at all times be at least as high as the rates of wages prevailing in similar trades throughout the districts in which its plants and offices are located, and payments under the co-operative plans are additions to said wages and not in lieu thereof. Continuous service is necessary to entitle employees to payments under the plans, although absence of thirty days or less due to sickness, vacations, suspension of operations, or leave of absence are not regarded as interruption of continuous service. Interruption occurs, however, from chronic tardiness or absence without leave aggregating six working days per year, and payments are forfeited, as they are likewise in the case of disloyalty. The rules are rigidly enforced, as exceptions would weaken the system and be unjust to employees who observe the rules. Obviously, therefore, only steady, true, and capable employees receive payments under the plans, which indeed are the reward of merit rightly earned. Experienced, loyal employees do more and better work and are worth more than the prevailing wage rate which floaters also receive. Lower labor turnover, lower costs, and better products for the corporation and its customers result from the co-operative plans, and the management naturally strives continuously to minimize the turnover. Death, removals, change in voca-





SCENES IN KITCHEN—PLANT NO. 2



tions, family necessities, and other natural causes produce a normal turnover which is expected. The big and wasteful turnover, however, is caused by the transient, restless members of our population who regard lightly the responsibilities of life and their duties to themselves and to society. There are several millions of such persons working intermittently in industry, agriculture, and what not, who will not stay put. Whether they be too ignorant to appreciate the consequences of their shiftlessness, with the personal misfortune it entails, or are indifferent thereto, or whether the germ of idleness is in their blood, makes no difference so far as economic waste is concerned. Industry is constantly employing such men and young men just beginning to work with no serious ideas of responsibility, and earnest, patient efforts are made to teach these men how to do their work. It takes time and costs money to employ new men, who, while green, are inefficient, slow, and an actual retardant to production, and therefore, no intelligent employer hires any man unless he believes that man will make good. His competence or incompetence can be determined, however, only by a trial. If he proves incompetent, he is discharged, and if he is competent but irresponsible, he resigns. No sane employer ever discharges a competent man as long as his business is prosperous, because he realizes that competent workmen are the very pillars of industry. The vexatious problem of labor turnover, involving human nature itself, is with us to stay, and can only be ameliorated in particular



DINING ROOMS—PLANT NO. 2

cases as may best be done. The co-operative plans of the corporation have accomplished considerable in this respect. With an average of 17,097 factory employees in 1923, 11,376 who received anniversary checks had service records of one year or more. Twenty-seven thousand, six hundred and thirty-four employees who quit or were discharged were mostly of the transient character, as 90% of them had been employed less than one year. The labor turnover for the year at all plants was 159.1%. The co-operative plans and payments thereunder are described below:

*Dividends on Wages.* Employees receive dividend checks on each anniversary date of their employment based on their wages for the previous year, at the following rates percent: 5% on the first, second, third, and fourth anniversary, and 10% on the fifth and each succeeding anniversary. These rates have been in effect since August 1, 1919. They represent increases over the rates first adopted March 1, 1917. Thirteen thousand, three hundred and seventy-three factory and commercial employees received anniversary checks in 1923.

*Stock-Purchase Plan.* Employees may subscribe annually for either preferred or common stock up to 20% of their annual wages, maximum \$300, after three months' service, by paying 10% down and 90% in monthly installments of 3% of the purchase price. All cash dividends and stock dividends paid are credited to employees, and 6% interest is charged against unpaid balance. Employees who keep up their payments receive continuous service credits of





SCENES IN HOSPITAL—PLANT NO. 2

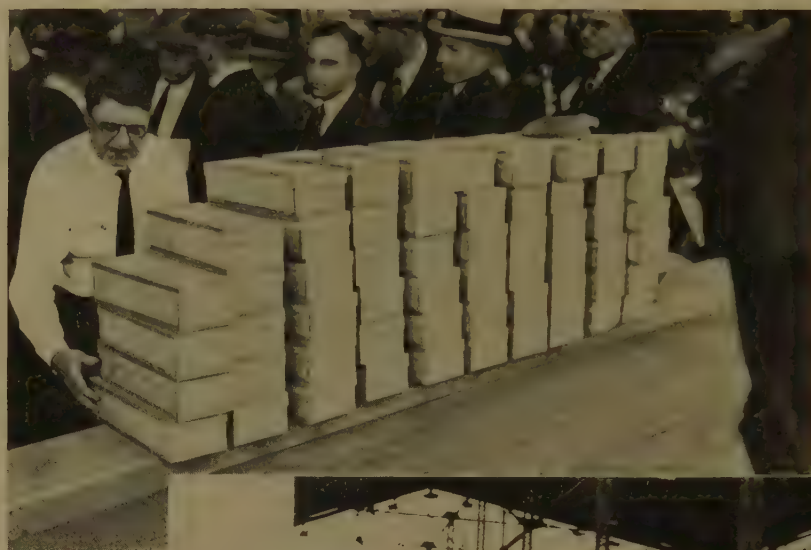


50% of the cash dividends, in addition to the regular rates of dividends received by stockholders, and stock certificates are delivered to employees at the expiration of thirty months from the date of purchase. The object of this plan is to encourage thrift and induce employees to become stockholders. Over 3,000 employees have taken advantage of the plan.

*Vacations to Factory Employees.* Upon the completion of two years of service, factory employees receive one week's vacation with pay; 6,742 factory employees received vacations in 1923.

*Pensions.* Employees whose annual earnings for the preceding five years averaged not more than \$3,000 per annum, who have been continuously in the service of the corporation for twenty years or more, and who have reached the age of sixty years, may voluntarily retire or be retired on a pension, the amount of which is 25% of their average annual earnings for the preceding five years, with a minimum of \$30 per month. In the event of the death of a pensioner leaving a dependent wife or minor child, \$500 is paid by the corporation to such dependents. On December 31, 1923, there were 68 employees honorably retired on pension. Many employees over sixty years of age with more than twenty years of service to their credit are still in active service.

*Insurance Plan.* Dependents of a deceased employee of five years' service whose annual earnings were less than \$3,000, receive a payment of \$500.



71ST ANNIVERSARY CELEBRATION—PRESENTATION OF SERVICE MEDALS

## PROFIT-SHARING AND CO-OPERATIVE PLANS

The following table shows the payments under the co-operative plans for the past seven years:

<i>Year</i>	<i>Anniversary Checks</i>	<i>Vacations</i>	<i>Stock Purchase Expense</i>	<i>Pensions and Insurance</i>	<i>Total</i>
1917	188,902	.....	.....	6,545	195,447
1918	174,155	.....	.....	6,463	180,618
1919	303,324	65,442	8,024	9,691	386,481
1920	784,296	131,110	175,585	19,882	1,110,873
1921	880,787	146,822	90,093	23,615	1,141,317
1922	1,015,403	189,894	*61,345	28,057	1,172,009
1923	1,336,927	234,819	30,097	33,481	1,635,324
<b>Total</b>	<b>4,683,794</b>	<b>768,087</b>	<b>242,454</b>	<b>127,734</b>	<b>5,822,069</b>

\*Gain from re-sale of stock bought back from employees who desired to sell stock held for their account. The plan does not now permit such practice.

The total expense of operating the co-operative department for 1923 was \$1,993,360, or \$358,036 more than the total payments made directly to labor as shown above, which covered administrative expense of the department, employment, hospitals, payments under the Workmen's Compensation Acts, monthly publication of the *Co-operator* for factory employees at all plants, maintenance of military bands, and other co-operative activities.

While these expenses show no offsets on the books, such offsets are not calculable in dollars and cents. For example, labor turnover was decreased, loyalty and efficiency of labor was greater, the men-hours per car produced were less, and the quality of cars turned out was better.





CO-OPERATIVE AND EMPLOYMENT DEPARTMENTS, SOUTH BEND



## PROFIT-SHARING AND CO-OPERATIVE PLANS

The combined savings from these things undoubtedly offset the expense.

The following table shows the average number of factory employees, payroll, and average wages per employee for the past thirteen years:

<i>Year</i>	<i>Av. No. Factory Employees</i>	<i>Payroll</i>	<i>Av. Wages per Employee</i>
1911	9,148	\$ 5,949,061	\$ 650
1912	8,862	6,215,526	701
1913	9,749	8,469,533	869
1914	7,934	6,053,597	763
1915	8,918	7,668,732	860
1916	12,509	11,409,956	912
1917	9,444	8,677,456	919
1918	9,156	11,437,466	1,249
1919	9,842	14,139,210	1,437
1920	11,995	20,269,343	1,690
1921	10,632	15,926,641	1,498
1922	14,229	22,522,591	1,583
1923	17,097	29,275,181	1,712

It is interesting to note that the average per employee of \$763 in 1914 increased to \$1,712 in 1923, or 124%, and that the 1923 wages were considerably higher than any of the war or post-war years, and yet prices of Studebaker cars are lower today than they were in 1918 or since, because of the greater efficiency of labor as reflected by the reduced number of men-hours per car produced, and because of the increased production and use of labor-saving machinery made possible by plant expansion.



OLD EMPLOYEES HONORABLY RETIRED ON PENSION—1922

On September 29, 1923, the corporation celebrated its seventy-first birthday at Springbrook Park, South Bend, where thousands of employees and their families were entertained. Service medals for old South Bend employees were distributed at this gathering. Bronze medals for five years of service were given to 868 employees, bronze medals for ten years of service to 269 employees, silver medals for fifteen years of service to 120 employees, and gold medals for twenty or more years of service to 162 employees. The author pinned a gold medal on the breast of Adolph Wolter, seventy-one years of age, with fifty-one years of service to his credit, the oldest employee in service. One thousand, two hundred and twenty-six medals for employees of the Detroit and Walkerville plants and branch offices were distributed, and annually hereafter general distributions will be made. Employees appreciate these mementos as acknowledgment of and appreciation by the corporation of loyal service.

Needless to say, the profit-sharing plans and co-operative plans of the corporation have received the approval of the stockholders every year.

Dr. Charles A. Lippincott, Manager of the Co-operative Department of the corporation, is responsible for the administration of the co-operative plans at all plants and commercial offices with C. S. Slack and J. E. White as assistants. The employment department which examines and employs men and women is under his direction. Employees are transferred between departments whenever

necessary, and are counseled and aided by him on all matters respecting their work, prosperity, and health. He participates with the Manufacturing Department in all discussions about wage rates, operating hours, and working conditions. The hospitals, doctors, and nurses at the various plants are under his management. He co-operates with the social, recreational, and musical organizations, such as the men's clubs, women's clubs, glee clubs, bowling teams, baseball teams, Studebaker Military Band, and Studebaker Symphony Orchestra, composed of employees of the corporation. He is, when all is said and done, the "Great White Father" of the employees, the buffer between them and production. When it is remembered that 23,000 employees with their families are dependent upon the corporation for their livelihood, the necessity for a Co-operative Department becomes apparent.

Before taking up this work, Dr. Lippincott was an outstanding figure in the civic and religious life of Northern Indiana, and minister of the First Presbyterian Church at South Bend. Before the United States entered the war, he organized and was chairman of the St. Joseph County Chapter of the American Red Cross, which office he retained for several years. He was a prominent figure in the Liberty Loan drives, the War Chest drives, and many other public activities. The degree of LL.D. was conferred upon him by the University of Notre Dame du Lac at South Bend, Indiana, for distinguished service. He is a 33rd degree Mason, and is at the present time the Grand



Master of the Grand Lodge of Masons of the state of Indiana. Believing that the broader field of the co-operative work of the corporation offered an opportunity for great humanitarian service, Dr. Lippincott resigned the pastorate of his church, but retained his ministry, and accepted the position of Manager of the Co-operative Department of the corporation, in August, 1919, since which date he has directed this work in an admirable manner and won the confidence, respect, and love of the entire organization.



PLANT NO. 1, SOUTH BEND, WITH PLANT NO. 2 IN DISTANCE, SHOWING NEW CLOSED BODY PLANTS IN FOREGROUND AND AT LEFT,  
WITH ADMINISTRATION BUILDING IN LEFT FOREGROUND



## Chapter 10

### *Plants and Property*



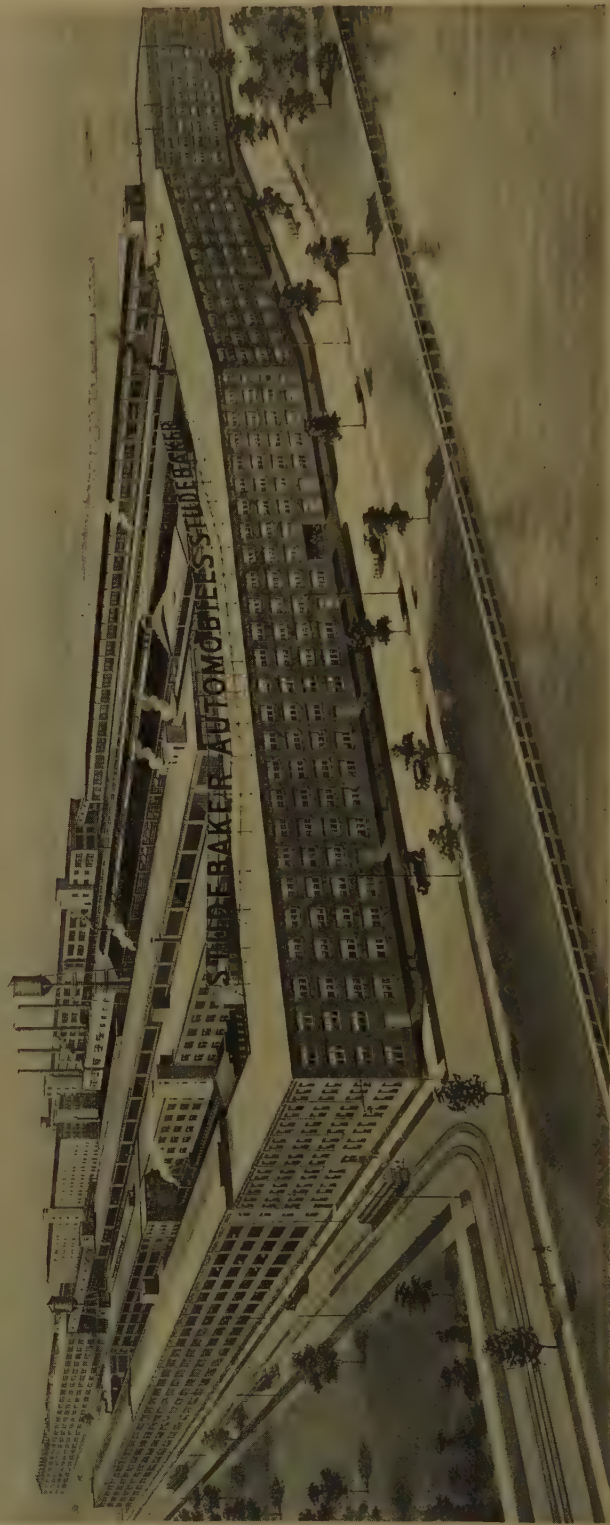
IT is a mathematically proven fact that quantity production reduces cost in any industry, and can be applied to the manufacture of most articles of common use. Both the extent and cost of plant facilities for quantity production are determined by the character of the article to be produced. The machinery and floor space required for quantity production of chewing gum, safety razors, biscuits, patent medicine, and canned fish, for example, are quite limited and simple as compared with those needed for quantity production of automobiles, but costs are lowered in either case. Low cost of purchased materials, constant specialization of labor, and low overhead expenses and profits per unit produced, make minimum prices to the consumer. The Siamese twins, mass production and mass consumption, are born of big business. Automobiles are the bulkiest, most complex, and most valuable article yet produced under quantity production methods. As a consequence, automobiles have



PLANT NO. 2, SOUTH BEND, SHOWING POWER HOUSE AND MACHINE SHOP IN FOREGROUND, WITH SUB-ASSEMBLY BUILDING BEYOND.  
NEW IRON FOUNDRY RIGHT BACKGROUND, FORGE SHOP AND STAMPING PLANT ADJOINING.  
CAR ASSEMBLY, CAR STORAGE AND SHIPPING AT LEFT



been placed within the reach of every man. The Ford Motor Company has over \$300,000,000 invested in plant facilities for quantity production, and a Ford car can now be purchased for \$295, which is about the price of a good motorcycle. The Studebaker Corporation has \$50,000,000 invested in plant facilities, and perhaps as many as ten other individual manufacturers in the United States have investments ranging from \$10,000,000 to \$40,000,000. There are upwards of 150 producers of automobiles in England and 125 in France, not one of which possesses plant facilities equal to those of the leading manufacturers of the United States, nor engage in quantity production, and consequently the prices of these American-made cars are so much lower than British and French cars that these countries maintain high tariffs to protect their home markets from our competition. Italy, Belgium, and Germany produce automobiles, and the same situation exists respecting them. Because of low production costs, however, American cars are sold in these countries in fairly large quantities, despite these high tariffs. When European manufacturers compete with American cars in agricultural and non-automobile manufacturing countries, they are unable to make much headway, because of the low prices American cars enjoy from quantity production. Over 100 individual makes of automobiles are produced in the United States. Twelve of them are produced by big manufacturers and the rest are "made" by assemblers who purchase parts from parts manufacturers.



PLANT NO. 3, DETROIT, FRONTING ON DETROIT RIVER. SPECIAL-SIX AND BIG-SIX CHASSIS MADE AT THIS PLANT

The minimum cost at which any automobile manufacturer could produce would be obtainable with plant facilities which permitted the complete manufacture of all the parts of his car from raw materials gathered by him from natural resources, without the payment of profits to any middlemen, and a volume of production equal to that of the largest specialized maker who competed against him. This theoretical minimum cost will hardly be attained and held by any automobile manufacturer, because certain of his "raw materials" are produced in vast quantities by large concerns and organizations, under highly competitive conditions, which specialize in such work and can therefore make prices which he cannot equal by producing for his comparatively limited wants. For example, hair, leather, textiles, lumber, and glass are "raw materials" of this kind. Pig iron, steel, copper, and aluminum are mined, milled, and sold at prices which are usually low enough to discourage automobile manufacturers from venturing into such industries for their own comparatively small requirements. The tire industry is so vast and competitive conditions so keen that no automobile manufacturer has yet been able to make tires cheaper than he could buy them. Each automobile manufacturer must, therefore, determine for himself how far back to nature he must go for raw materials. In the case of leather and glass, one or two manufacturers are now making part of their own requirements, but it is doubted whether substantial savings will result from such efforts. Generally





PLANT NO. 5, DETROIT, ENGINEERING AND MANUFACTURING DEPARTMENT EXECUTIVE OFFICES. ALL SERVICE PARTS  
MADE IN THIS PLANT



speaking, therefore, manufacturers buy their leather, textiles, lumber, glass, pig iron, steel, bronze, brass, aluminum, and tires from industries which make them, and commence manufacture of cars from this point. Their cars are designed complete by their own engineering departments, with each part co-ordinated to make a harmonious, smooth-running machine. Manifestly, therefore, these manufacturers make their own drop forgings, stampings, and castings from forging steel, sheet steel, and pig iron, copper, and aluminum. Their machine shops machine all forgings and castings, and stamping plants form all steel shapes. Their assembling buildings, with assembling and testing fixtures, stock rooms, and conveyors, make motors, transmissions, axles, and other assemblies, and assemble all finished cars. Body buildings, with dry kilns, wood-working, steel-paneling, upholstering, trimming, and paint shops, with necessary stock rooms, machinery equipment, conveyors, drying ovens, and such things, are essential for body production. Extensive stock rooms, store houses, and train sheds for receiving and shipping facilities are needed. Power houses for power, light, and heat are likewise required.

The enormous plant facilities thus indicated involve the investment of scores of millions of dollars, but quantity production and low costs are impossible of attainment without them. Studebaker plants at South Bend, Ind., Detroit, Mich., and Walkerville, Can., occupy 225 acres, with buildings erected thereon containing 7,500,000



PLANT NO. 7, WALKERVILLE, ONTARIO, FOR BRITISH EMPIRE BUSINESS

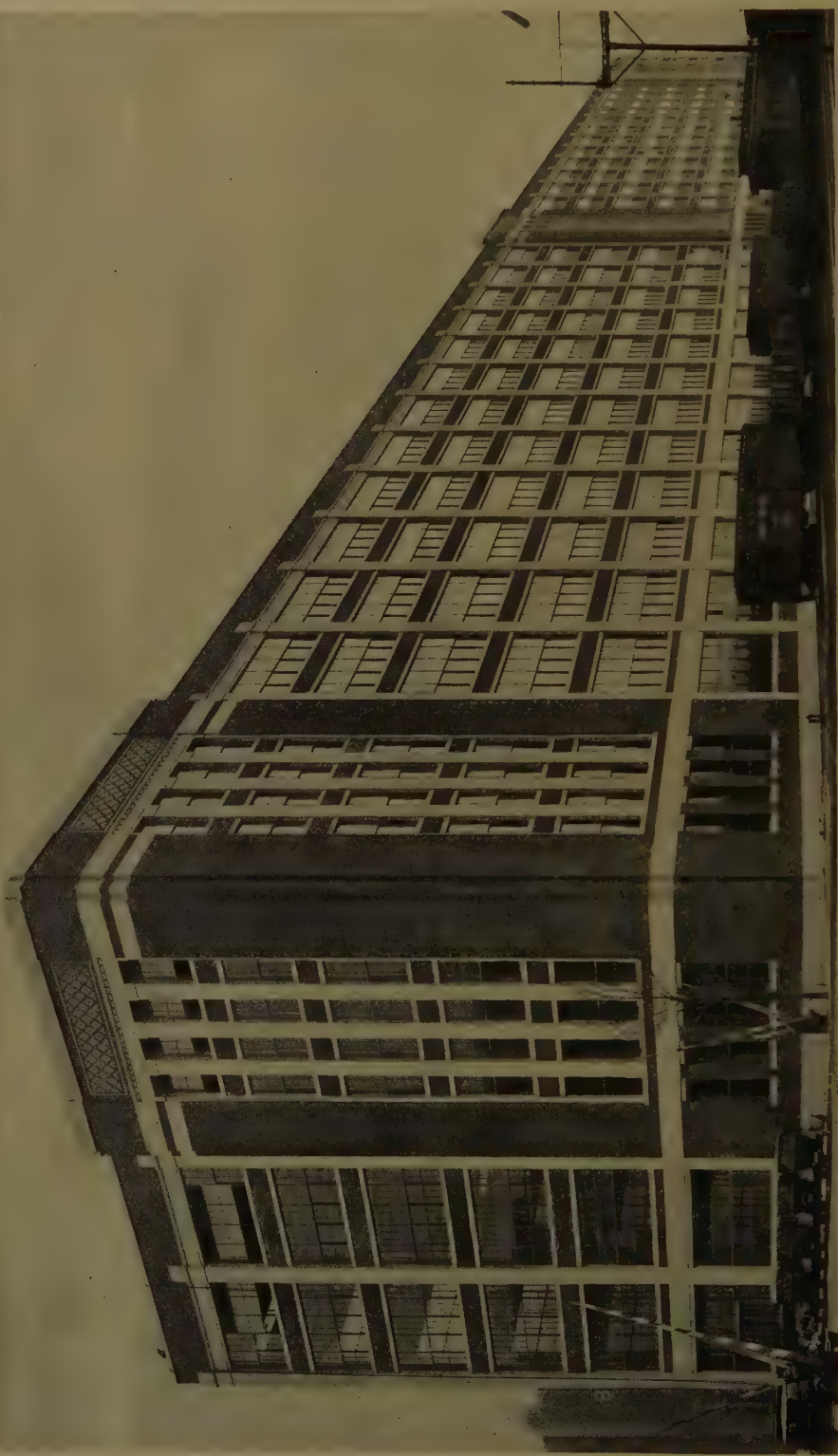
sq. ft. of floor space and cost over fifty million dollars, with a production capacity of 180,000 cars per annum and employment at capacity of 23,000 persons.

Gross expenditures for plant expansion and betterments made by the corporation since the armistice was signed amounted to the enormous sum of \$39,407,979.32 covering cost of new buildings and post-war machinery, equipment, and facilities of the most modern kind known to the machinery trade and automobile industry. An additional \$7,769,524.03 was spent for similar purposes during the four-year war period. Savings from these new plant facilities with their modern labor-saving machinery, better manufacturing methods, and more efficient labor resulted in a reduction of over 50% in the number of men-hours per car produced, permitted the corporation to sell its cars at lower than 1918 prices and enabled it to pay its labor 124% more than the 1914 average wage. A brief description of the different plants and of the new buildings and facilities that have been erected since 1914 is as follows:

*Plant No. 1, South Bend.* This is the former vehicle plant which now makes automobile springs, small forgings, small stampings, windshields, wood body frames, running boards, open bodies, closed bodies, cushions, trimming, and curtains for all three models of Studebaker cars.

The new LIGHT-SIX closed-body building, erected in 1922, with an older brick building adjoined, is four stories,





PLANT NO. 1, ONE OF THE CLOSED BODY BUILDINGS





PLANT NO. 1, HEATING AND FORMING SPRINGS



PLANT NO. 1, FORMING SPRING EYES



PLANT NO. I, SECTION OF WOOD-WORKING SHOP



PLANT NO. I, CLOSED BODY FRAMING

767x172 ft., and contains 544,664 sq. ft. Equipped to assemble wood frames; apply steel paneling; clean, paint, varnish, finish; make cushions, trimming, and curtains for 150 bodies per day. Power conveyors carry frame work to complete finish through drying ovens. Progress requires nineteen days to complete, and 2,500 bodies are in process at capacity operations.

New dry kilns are four stories, containing 211,959 sq. ft., and have total capacity over 3,000,000 board feet.

New closed body building for SPECIAL-SIXES and BIG-SIXES, erected in 1923, is six stories, 820x100 ft., contains 511,680 sq. ft. Equipped to assemble wood frames; apply steel paneling; clean, paint, varnish, finish; make cushions, trimming, and curtains for 150 bodies per day. Power conveyors carry frame work to complete finish through drying ovens. Progress requires twenty-one days to complete, and 2,700 bodies are in process at capacity operations. This building contains five miles of power conveyors, and 630,000 cu. ft. of drying oven space. The 4,000,000 candle-power Studebaker Beacon Light for aviators and motorists is mounted atop of the 150,000 gallon water tank on top of this building.

*Plant No. 2, South Bend.* The new LIGHT-Six plant built complete since 1916, consists of:

Forge Shop, one story, 742x161 ft., 146,576 sq. ft. Equipped with steel yards on both sides, with cranes and electric magnets to handle same; also forging hammers, heat-treating ovens, carbonizing ovens, electric cranes,





PLANT NO. I, PANELING CLOSED BODIES



PLANT NO. I, RUBBING DECK





PLANT NO. I, CUTTING AND SEWING TRIMMINGS



PLANT NO. I, TRIMMING CLOSED BODIES



PLANT NO. 2, ONE OF THE STEEL YARDS



PLANT NO. 2, SECTION OF FORGE SHOP



machines, dies, inspection gauges, tools, etc. Makes all axles, crankshafts, camshafts, connecting rods, gears, steering knuckles, etc., for Studebaker LIGHT-SIXES.

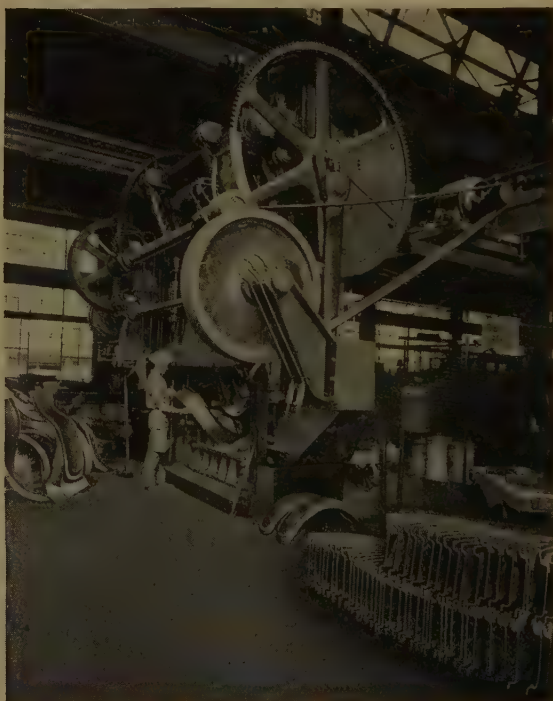
Stamping Plant, one story, 524x183 ft., and one story 100x96 ft., 120,448 sq. ft. Railroad tracks inside building unload sheet steel to stores opposite presses. Equipped with presses, including \$60,000 press for automobile frames, electric cranes, riveting machines, fixtures and tools for assembly, inspection gauges and tools, enameling ovens, etc. Makes all stampings for LIGHT-SIXES, such as frames, fenders, hoods, strips, etc.

Iron Foundry, one story, 722x690 ft., 575,419 sq. ft., including 70,000 sq. ft. of tunnels. All moulding and core sand, coke, pig iron, steel and iron scrap, limestone, and foundry refuse stored in material bay, with railroad tracks entire length, equipped with six cupolas, core ovens, flasks, patterns, electric cranes, power conveyors, machine shop, pattern shop, cafeteria, rest rooms, hospital, and every modern improvement. Capacity 600 tons of castings daily, sufficient for 1,000 Studebaker cars and all service requirements. One of the most modern and efficient foundries in the world.

Machine Shop, one story, 576x425 ft., 253,215 sq. ft. Equipped with machine tools, jigs, fixtures, tools, power and gravity conveyors, inspection gauges and fixtures, etc., rest rooms, hospital and operating room. Machines all castings and forgings for LIGHT-SIXES. Capacity 375 cars per day.



PLANT NO. 2, SECTION OF STAMPING PLANT



PLANT NO. 2, PRESS FOR MAKING FENDERS



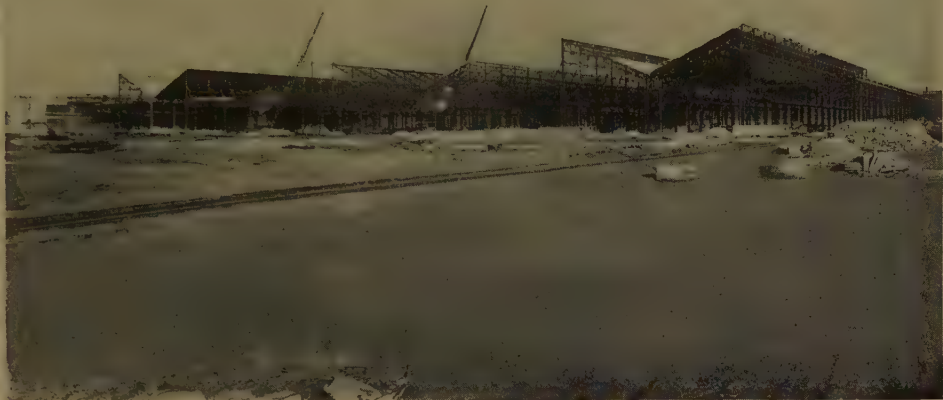
Stores and Assembly Building, four stories, 524x192 ft., 366,368 sq. ft. Railroad entire length in center court, with numerous concrete balconies projecting from each floor on both sides, and two electric cranes for unloading parts on balconies opposite stock rooms where conveyors pass. Ground floor, stock room for rough stores. Motors, front axles, rear axles, transmissions, and steering gear assemblies made in this building for LIGHT-SIXES only. Fourth floor contains factory executive offices and employees' restaurant.

Open Body and Final Car Assembly Building, four stories, 789x192 ft., 449,052 sq. ft. Railroad entire length in center court, with numerous concrete balconies projecting from each floor on both sides, and two electric cranes for unloading parts on balconies opposite stock rooms. Cushions, trimmings, tops, and curtains assembled on fourth floor. Open body stock room on third floor. Motor stock room and parts for final car assembly on second floor. Final car assembly on ground floor. Power conveyors provided for six assembly lines. Dynamometer test equipment on this floor.

Open Body and Car Storage Building, four stories, 988x77 ft., 301,919 sq. ft., with adjoining court, one story, 789x40 ft., 31,560 sq. ft. Ground floor used for washing, polishing, and delivery of final cars for shipping. Second floor for car storage. Third and fourth floors used for cleaning, painting, and finishing LIGHT-SIX touring car bodies only.



PLANT NO. 2, NEW IRON FOUNDRY COMPLETED IN 1914—COVERS 11 ACRES

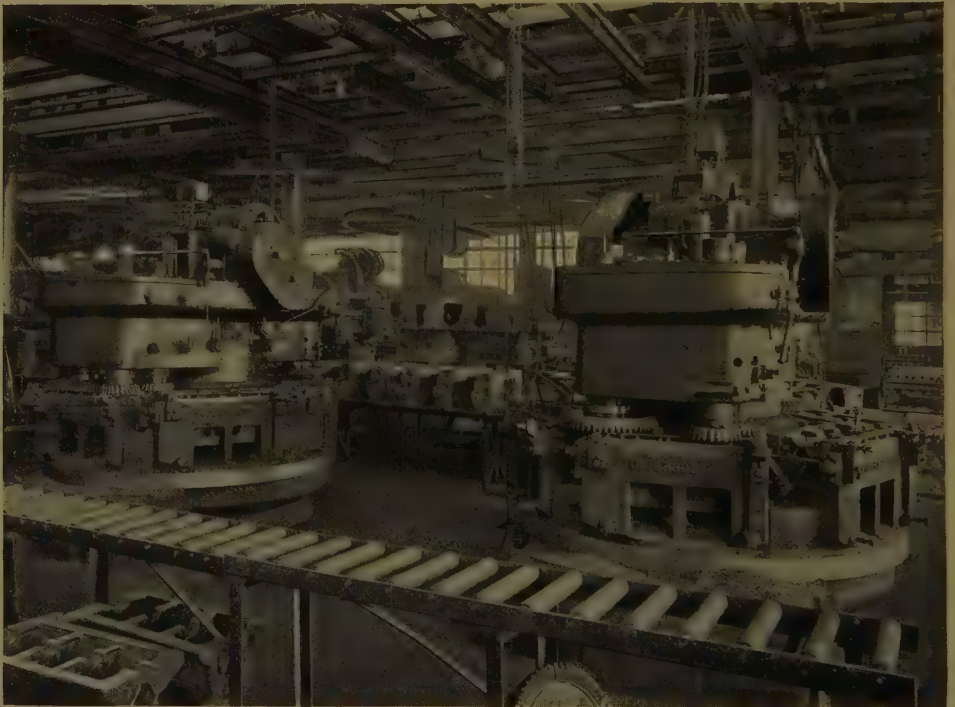


PLANT NO. 2, VIEWS OF NEW IRON FOUNDRY—UNDER CONSTRUCTION





PLANT NO. 2, SECTION OF MACHINE SHOP



PLANT NO. 2, MILLING CYLINDER CASTINGS





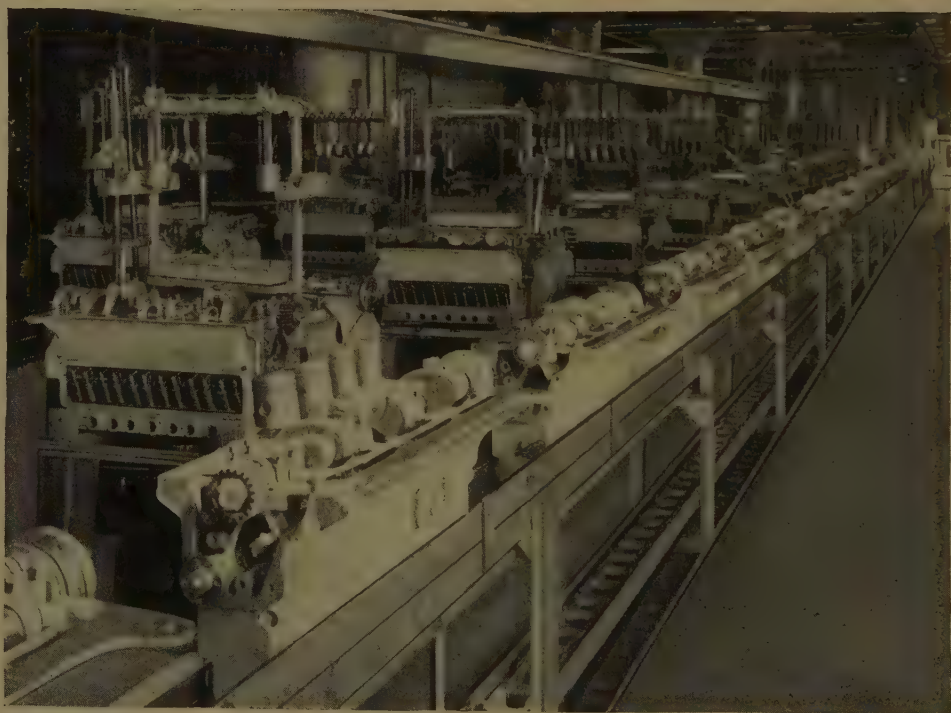
PLANT NO. 2, MACHINING PISTONS



PLANT NO. 2, MACHINING CONNECTING RODS



PLANT NO. 2, SECTION OF MOTOR ASSEMBLY DEPARTMENT



PLANT NO. 2, ANOTHER VIEW OF MOTOR ASSEMBLY DEPARTMENT



Car Shipping and Train Shed Building, one story, 988x77 ft., 76,076 sq. ft. Two railroad tracks and two concrete shipping platforms entire length, third track one-third length. Electric cranes and all equipment for economical handling, shipping, and protection of employees. Capacity 500 cars daily.

Power House, two stories, 208x165 ft., 54,949 sq. ft. Equipped with 16 boilers, 26,000 h.p., which furnish steam for operating steam turbine generators, air compressors, steam pumps, steam hammers, dry kilns, and for heating. Four steam turbine generators, 16,000 k.w. capacity, supply electric current for power and lighting Plants No. 1 and No. 2, including 47 freight and 6 passenger elevators, 4,000 motors ranging from  $\frac{1}{8}$  to 700 h.p., and about 700 electric driven hand tools. Seven steam and 5 electric driven air compressors, capacity 24,500 cu. ft. per minute, used to operate riveting hammers, air hoists, air chucks, body conveyors, moulding machines, sandblasting, paint spray guns, and in many places for cleaning purposes.

Cooling Pond, 150x350 ft., contains 1,545,000 gallons of water for condensing exhaust steam from turbine generators.

Fuel Oil Storage Underground Tank, contains 1,000,000 gallons of fuel oil for heat-treating and carbonizing furnaces, and heating steel for drop forgings and springs.

General facilities for the South Bend plants include two and one-half miles of underground tunnels containing pipe

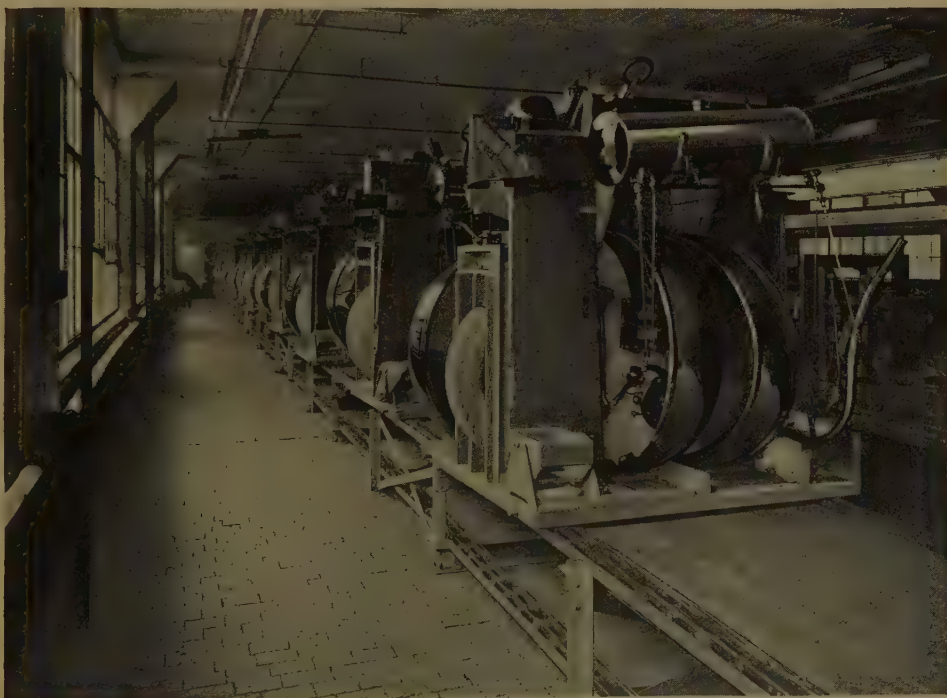


PLANT NO. 2, INTERIOR COURT SHOWING TRAVELING CRANES AND RECEIVING BALCONIES





PLANT NO. 2, REAR AXLE ASSEMBLY DEPARTMENT, SHOWING CONVEYORS



PLANT NO. 2, CAR PART RACKS PASSING THROUGH STOCK ROOM



PLANT NO. 2, SECTION OF FINAL CAR ASSEMBLY DEPARTMENT



PLANT NO. 2, ANOTHER VIEW OF FINAL CAR ASSEMBLY DEPARTMENT



lines for high and low pressure steam, exhaust steam, heating, hot and cold water, high and low pressure air, fuel, quenching and lubricating oils; seven artesian wells driven by electric pumps, with capacities from 400 to 750 gallons per minute each; eight and one-half miles of internal railway tracks, with three 65-ton locomotives for switching; seventeen trunk line telephones, with over 400 different connections.

*Plant No. 3, Detroit.* This plant manufactures complete chassis for SPECIAL-SIX and BIG-SIX models. It is supplied by Plant No. 1 with springs, castings, closed bodies, and other parts, and has a capacity of 275 cars per day. Equipment consists of modern and complete forge shops, stamping plant, machine shops, storage buildings, sub-assembly and final car assembly buildings, dynamometer and final test and shipping buildings, and everything for adequate manufacture. Many new buildings were erected during and since the war, providing an additional 780,828 sq. ft. of floor space, as shown on following page.

*Plant No. 5, Detroit.* This plant stores and ships service parts for all models of Studebaker cars. It also manufactures some parts like bolts, screws; etc. Power driven conveyor belts on all floors pass stock bins where parts orders are executed, and parts are carried mechanically to the shipping department on the ground floor. Persons writing out orders on the fourth floor and going immediately to the shipping department will find the



PLANT NO. 2, FINISHED CARS IN DYNAMOMETER TEST



PLANT NO. 2, TRAIN SHED





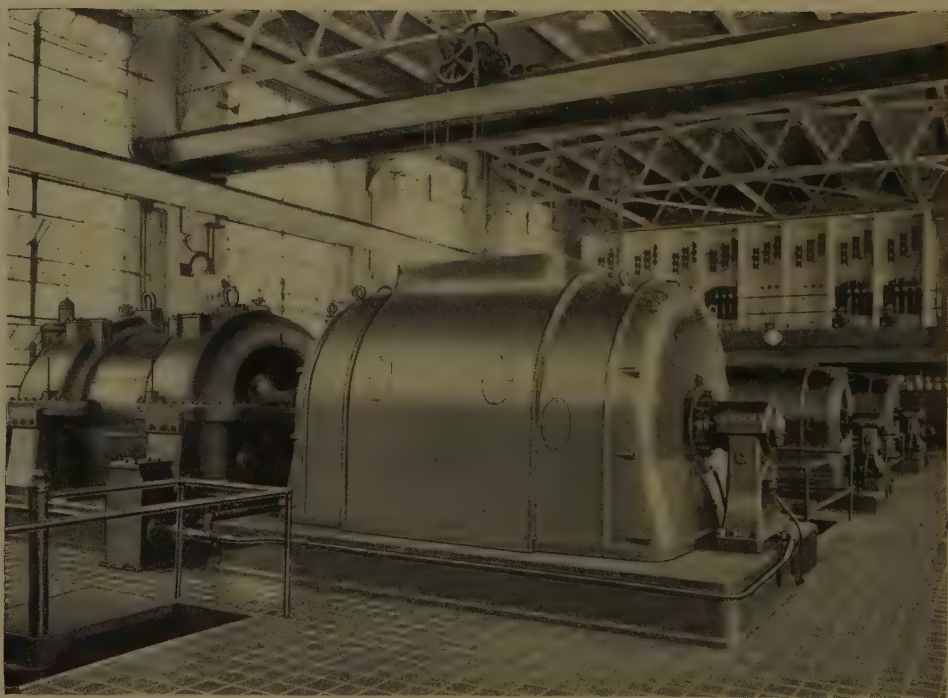
PLANT NO. 2, LOADING BOXED AUTOMOBILES FOR EXPORT



PLANT NO. 2, SOLID TRAIN LOAD OF LIGHT-SIXES LEAVING PLANT NO. 2



PLANT NO. 2, POWER HOUSE



PLANT NO. 2, TURBINE HALL, POWER HOUSE

# PLANTS AND PROPERTY

goods have also arrived. Most orders are shipped on the day received, and practically all within twenty-four hours. The executive offices of the Manufacturing Department, Engineering Department, Experimental Department, and Methods and Standards Department are located at this plant.

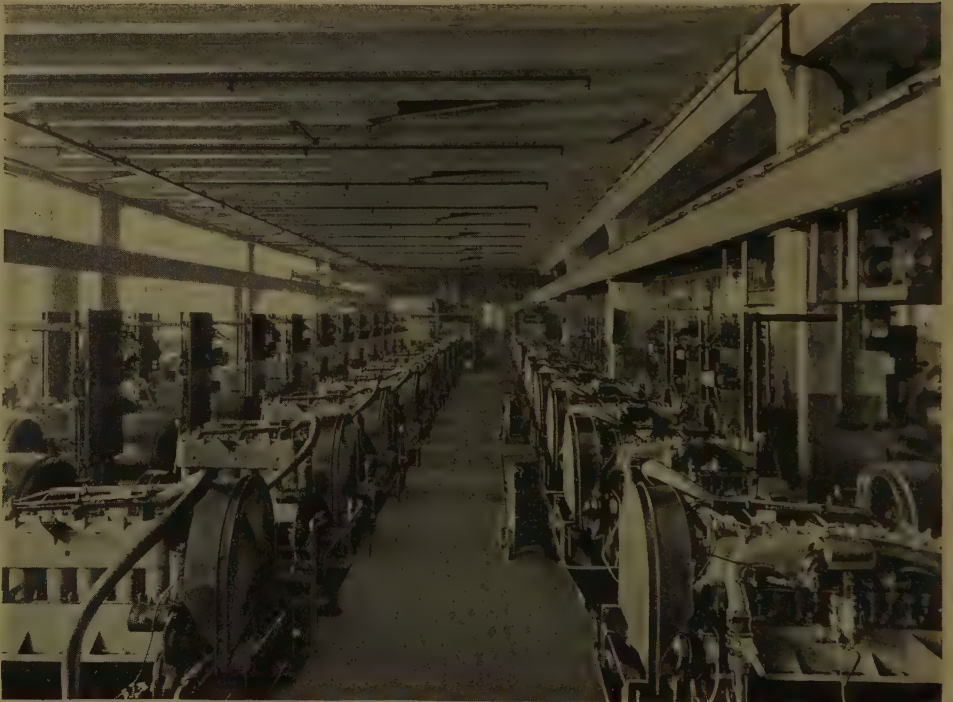
<i>Bldg. No.</i>	<i>Used for</i>	<i>Construc- tion</i>	<i>Floors</i>	<i>Dimen- sions</i>	<i>Floor Space Sq. ft.</i>
4	Machine Shop . . . .	Brick	4	163x52	34,000
5	Machine Shop . . . .	Brick	4	162x52	33,936
10	Die Shop, Painting and Chassis Assembly . .	Brick	4	167x59	39,436
11	Painting and Car As- sembly . . . . .	Brick	4	292x50	53,462
14	Forge Shop and Heat Treating . . . . .	Steel	1	365x66	17,274
16	Blacksmith Shop . . .	Steel	1	74x44	3,259
17	General Stores, Motor Assembly, and Office	Concrete	5	463x60	115,210
24	Stamping and Enamel- ing . . . . .	Concrete	4	220x75	64,852
25	Car Storage and Ship- ping . . . . .	Concrete	5	260x77	99,200
28	Frame and Spring Stor- age . . . . .	Steel	1	354x50	17,731
30	Machine Shop . . . .	Concrete	4	282x93	103,645
31	Frame Assembly and Car Test . . . . .	Concrete	5	442x59	134,650
	Platforms and Bridges .	.....	..	.....	64,173
Total					780,828

Old buildings wrecked to make room for these new ones were charged off.





PLANT NO. 3, DIFFERENTIAL ASSEMBLY DEPARTMENT

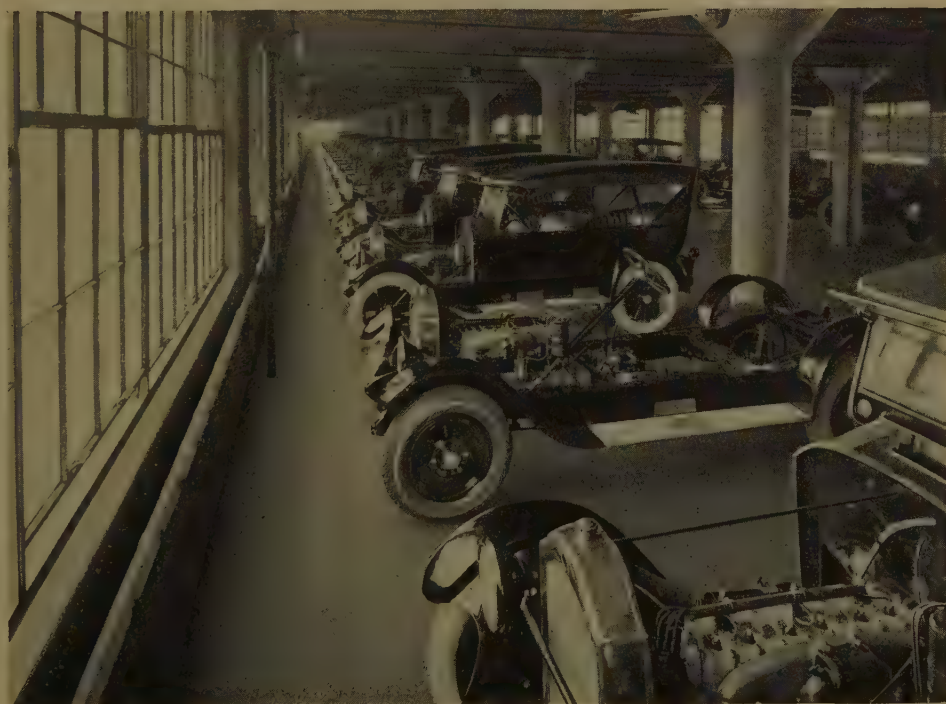


PLANT NO. 3, BIG- AND SPECIAL-SIX MOTORS IN DYNAMOMETER TEST





PLANT NO. 3, SECTION OF FINAL CAR ASSEMBLY DEPARTMENT



PLANT NO. 3, BIG- AND SPECIAL-SIX CARS IN DYNAMOMETER TEST



PLANT NO. 5, ONE OF THE PARTS STOCK ROOMS



PLANT NO. 5, PARTS SHIPPING ROOM

*Plant No. 7, Walkerville, Canada.* This plant receives motors, transmissions, axles, bodies, and other parts from Detroit and South Bend plants, which, with wheels, tires, tops, radiators, and other parts purchased in Canada, are assembled into complete cars for Canadian and British Empire trade. Four new buildings, containing 36,500 sq. ft. of floor space, were erected in 1920. Plant has a capacity of from 12,000 to 15,000 cars per annum.

Most of the buildings erected by the corporation during and since the war are of reinforced concrete construction, many with brick facing. A few buildings, notably the iron foundry and stamping plant at South Bend, are of reinforced concrete, steel, and brick construction. All plants are insured in the factory mutual insurance companies.

Over 12,500 machines are used in 342 manufacturing departments. Over 1,200 inspectors are employed in the plants and 96,000 inspection operations on all models are provided for during the course of manufacture. One thousand, seven hundred and sixty-nine manufacturing operations are accurate to one-thousandth of an inch, and 564 to one-half-thousandth of an inch.

Twenty-one thousand tons of pig iron, 113,500 tons of steel, 350,000 gallons of paint and varnish, 210,000 hides of leather, 1,778,000 sq. ft. of plate glass, 20,745,000 board feet of lumber, 7,500,000 gallons of fuel oil, 160,000 tons of coal, and 275,000,000 cubic feet of gas were used in 1923.

The ablest engineers, chemists, metallurgists, production experts, inspectors, and executives that money can



employ constitute the manpower back of the plants, the workers, and the products of the corporation.

The money for the plant expansion of the past five years was derived from the net profits of the business, and such use of these profits prompted the corporation to capitalize \$30,000,000 of the plant expenditures by issuing to stockholders that amount of common-stock dividends.

The property of the corporation, other than plants, consists of retail stores and service buildings at New York City, Brooklyn, Cleveland, Detroit, and South Bend, where it maintains retail branches. The stores and service stations have been either bought or erected since the war, and are modern and fully equipped in every respect. They permit the corporation to give prompt and efficient service to customers in these cities, and serve as models in these respects for its dealers to emulate.

The following table shows gross expenditures for plants and property, property sold or dismantled, depreciation charges, and plant and property accounts at the close of each year and sub-divisions for the pre-war, war and post-war periods:



# PLANTS AND PROPERTY

<i>Dec. 31</i>	<i>Gross Expenditures for Additions and Betterments</i>	<i>Plants and Property Sold and/or Demolished; less Reserve for Depreciation on Same</i>	<i>Depreciation (Charged to Operating Expenses)</i>	<i>Plant and Property Account</i>
1911	\$ 734,985.89	\$ 14,079.55	\$ 235,416.15	\$10,297,480.53
1912	853,247.87	335,900.25	225,177.42	10,589,650.73
1913	1,518,676.61	1,707.31	238,658.53	11,867,961.50
1914	570,749.41	18,876.87	361,794.01	12,058,040.03
Pre-War Period	3,677,659.78	370,563.98	1,061,046.11	
% Total . . .	7.2	26.4	15.6	
1915	752,707.03	12,262.76	397,991.01	12,400,493.29
1916	1,646,571.11	173,611.24	435,470.05	13,437,983.11
1917	2,522,422.06	52,873.20	430,345.56	15,477,186.41
1918	2,847,823.83	10,633.31	392,300.72	17,922,076.21
War Period	7,769,524.03	249,380.51	1,656,107.34	
% Total . . .	15.3	17.8	24.4	
1919	8,328,611.57	44,996.73	498,836.98	25,706,854.07
1920	11,166,990.86	6,159.79	705,080.53	36,162,604.61
1921	1,840,127.84	7,212.49	705,106.32	37,290,413.64
1922	7,375,836.00	215,326.17	1,024,741.48	43,426,181.99
1923	10,696,413.05	508,913.63	1,141,045.00	52,472,636.41
Post-War Period	39,407,979.32	782,608.81	4,074,810.31	
% Total . . .	77.5	55.8	60.0	
Totals . . .	50,855,163.13	1,402,553.30	6,791,963.76	



M. F. WOLLERING



C. L. BOCKUS



R. E. BAUS



## Chapter 11

### *Engineering and Manufacturing Departments*



THE Engineering Department is responsible for the design of the products of the corporation, and in co-operation with the Methods and Standards Department, for the character and quality of the materials of which they are made. The department is equipped with a large tool room and machine shop, supplemented by an experimental laboratory and assembly department, for the building of experimental models of cars and of all devices upon which experiments are desired. A big staff of engineers, draftsmen, artists, and expert toolmakers and mechanics constitutes the organization. Separate departments are maintained for chassis and body engineering.

After the Finance Committee has determined the character and lines of products wanted, this department makes the drawings and builds experimental models for testing and approval. When approved, it makes production drawings for the Manufacturing Department.



GUY P. HENRY



J. H. BOURGON



E. J. MILES



VINCENT LINK



Another function of the department is to experiment with and study new inventions and devices covering suggested evolutions or improvements in general automobile design. The Research Division conducts these investigations, which include, of course, studies of different models of competitive cars and parts. Samples of these cars are purchased, tested, dismantled, and carefully examined, in order that nothing of an interesting nature shall escape scrutiny and consideration.

Consulting engineers and engineers of manufacturers who supply the corporation with electrical equipment, carburetors, batteries, bearings, paints, varnishes, lubricants, and similar articles co-operate and consult constantly with the Engineering and Methods and Standards Departments.

A complete automobile is the product of many minds in the matter of design, and also of production. Purely mechanical functions and design are the problems of engineers, mechanical and electrical, but chemists and metallurgists must be consulted concerning alloys, iron, steel, leather, glass, paint, and other production materials. The management of the corporation, vested in the Finance Committee, determines types, wheelbase, passenger capacity, approximate weight, style, and appearance, with the assistance of the body engineers and artists. Production experts must be satisfied as to the manufacturing practicability of design and its adaptation to plant facilities. No living man can, therefore, say truthfully that he alone is the father of any automobile. Harmonious, efficient, com-



L. F. MAURER



C. N. DAWE



W. P. WOODSIDE



KARL L. HERRMANN



F. A. HURCOMB

fortable, durable, and beautiful automobiles are the product of many minds and great plant facilities.

The connection between the design and production of automobiles is so close and responsibility is so interwoven that the line of demarcation between the Engineering and the Manufacturing Departments cannot be sharply drawn. The liaison department of the corporation is the Methods and Standards Department, the head of which reports, as does the Chief Engineer, directly to the Vice President in charge of engineering and manufacturing.

The Methods and Standards Department, in co-operation with the Engineering Department, determines the kind and quality of alloys, iron, steels, other metals, glass, leather, tires, paints, varnishes, etc., which shall be used in production. This department also has its own chemical and physical laboratories which test materials, supplies, parts and assembly units in production, as will be explained hereafter.

The Manufacturing Department is responsible for the manufacturing plants of the corporation, including the building, equipment, and operation of them. After the Finance Committee approves products for production and fixes the production schedules, this department begins to function. The plant facilities within its control are described in another chapter. The organization it works with, divided into many departments, comprises upwards of 20,000 employees, and it, therefore, is the most complex and difficult of all departments to manage. A description of

these departments, with methods used, given in chronological order, is most interesting.

The Vice President in charge of engineering and manufacturing delegates responsibility for production to a General Production Manager and individual Production Managers for the South Bend, Detroit, and Walkerville plants. Numerous Superintendents rank next, in charge of the different foundries, forge shops, stamping plants, machine shops, tool and machinery maintenance, and body plants, with Assistant Superintendents supporting them. Foremen for all departments work under Superintendents, with assistants where required.

Chiefs of the Methods and Standards Department, Co-operative Department, Specifications Department, Purchasing Department, Receiving and Stores, Inspection Department, and Shipping Department, report either to the Production Managers or to the Vice President.

The Methods and Standards Department is in charge of William P. Woodside, a well known metallurgist, with Karl Herrmann and L. F. Maurer, mechanical engineers, and C. N. Dawe and F. A. Hurcomb, chemists and metallurgists, as chief assistants. In co-operation with the Engineering Department, as just explained, this department determines the character and kind of materials used in the products of the corporation, and the practicability of design from a manufacturing standpoint. In consultation with the General Production Manager, it determines whether given parts shall be manufactured by the cor-



poration or purchased outside, although in practice, purchasing outside is studiously avoided. In consultation with Production Managers, it determines the methods and departmental layouts with machinery, jigs, die and tool equipment, machine operations, and inspection operations on every part, and number of men required and piece rates. Machine loads, piece rates, and men requirements are based on experience and records. From the layouts, schedules of output by departments, per hour or per day, and productive labor costs, are easily fixed. If the manufacturing schedule is 600 cars per day, the equipment and layouts are arranged accordingly. The exact number of men required, by departments, is fixed by this department in accordance with the schedules, and the Production Managers and Superintendents hold foremen within the prescribed limits as to the number of employees, both productive and non-productive, in all departments. The laboratories test every lot of alloys, steel, iron, bronze bushings, foundry castings and other materials before they are accepted for production. Frequent tests of paints, varnishes, chemicals, soaps, fuel oil, coal, lubricating oil, leather, glass, electrical apparatus and instruments, and of all parts used in the cars and operating supplies used in production, such as tool steels, oils, paints, etc., are made by the laboratories. They constantly check and test motors, axles, transmissions, carburetors, batteries, electrical parts, wheels, axles, and other parts of the car to verify the accuracy of manufacture. Over 550,000 tests were



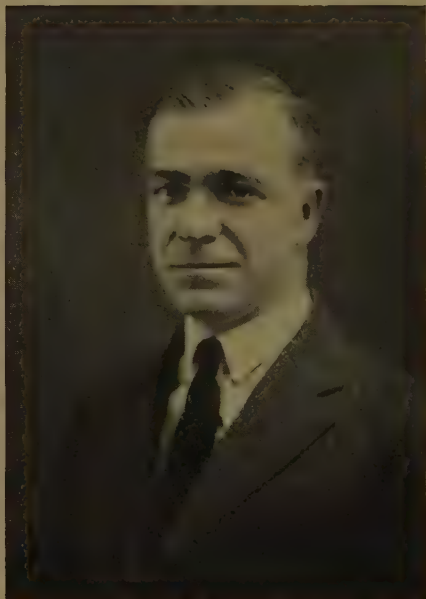
F. A. WADE



W. P. BLANCHARD



H. C. HINDS



S. C. SERGESON

made in 1923 in these production laboratories and by the Engineering Department.

This department makes extensive research into general manufacturing methods. Numerous investigations and visits to various plants throughout the country are made with the object of finding improved methods of manufacture whenever possible. It is constantly studying improved machinery and developments in tool steels, metallurgy, and chemistry. Its job is to be awake and alert to industrial developments and progress whenever and wherever it may be found.

The Specifications Department is in charge of W. C. Ens, a man of long experience. It receives production schedules from the Vice President's office. It separates the schedules by models and by parts, and makes requisitions on the Purchasing Department for the materials and parts required for the schedule. Thereafter, it issues production orders on the different plants for the production.

The Purchasing Department is in charge of Fred A. Wade, a veteran who has bought a half billion dollars' worth of materials for the corporation, assisted by S. C. Sergeson, W. P. Blanchard, H. C. Hinds, L. P. Andrews, C. E. Kachel and S. H. Gentle, all old timers. No purchases of any kind are made by any department except the Purchasing Department. Its most important function is to buy materials and parts for the products of the corporation. These purchases are made from the requisitions received from the Specifications Department, which show

the specifications as to kind and quality as well as quantity, and this department has no authority to deviate one iota from these specifications. It can only negotiate matters of price, service, and delivery. Numerous concerns have for years supplied the corporation with materials and thereby established a relationship which is respected and entitles them to first consideration when quality, price, and service are equal. Competition is always invited, however, and new sources of supply are frequently found to be advantageous. It is the business of this department to know sources, prices, and dependability. It uses the Methods and Standards Department to determine the dependability of the products and manufacturing facilities of unknown suppliers, and likewise to estimate costs when prices seem high, and thereby protect the corporation against paying too much.

The follow-up division of this department, working by correspondence and personal visits, insures prompt shipment and delivery of its orders. These men or members of the Traffic Department ride freight trains to prevent freight cars being sidetracked, and bring in emergency supplies as baggage on passenger trains when necessity demands it.

When purchased goods arrive in the Receiving Department, the responsibilities of this department end, excepting that it approves the prices on purchase invoices and passes them to the Accounting Department for matching with the receiving reports, verification of extensions, and payment.



Receiving and Stores Departments are maintained in each plant. Sellers put packing tickets in all shipments, which checkers hold until counters report quantity or weight of goods received. Packing tickets are then verified. Receiving reports are made from packing tickets when verified, and copies sent to the follow-up department, accounting department, and stores, where the goods follow after they have been inspected or tested and accepted by the laboratory or inspection department. No materials can enter Stores unless accompanied by an inspector's tag showing acceptance.

Materials are piled, binned, or racked in Stores, and card records are posted showing receipt. Deliveries of car materials are made on production orders, and other material on requisitions, and credits posted. The stock cards show balance on hand, and monthly verifications are made by audits.

Inspection Departments are maintained at each plant, and over 1200 inspectors are employed. Their function is (1) to inspect raw materials and supplies purchased by the corporation, and (2) to inspect mechanical operations, sub-assemblies, unit assemblies, and complete cars during the course of manufacture. Thousands of gauges, test fixtures, and inspectors' tools are provided for their use. Limits set by the Methods and Standards Department are rigorously observed. Inspectors have no discretion to compromise. Rejected parts are scrapped, and rejected materials and supplies are returned to shippers. Studebaker quality is in the keeping of the inspectors, and hence they are care-



B. H. WARNER



C. PRETZ



W. W. AUSTIN



E. B. MACKIE

fully selected and closely supervised. Over 96,000 inspections are made on the three models of Studebaker cars in course of manufacture. Two thousand, three hundred thirty-three limits of one-thousandth of an inch and of one-half-thousandth of an inch are fixed, in operations on these cars.

Shipping Departments are maintained at all plants. No property or products of the corporation can leave its plants except upon the authority of a shipping order. Covered train sheds of steel and concrete and railway tracks entering various buildings are provided for receiving and shipping goods, thereby protecting goods and keeping employees from exposure in inclement weather.

While the greater number of automobiles are shipped from the plants in freight cars loaded three in a car, or five when double-decked, large numbers are driven away under their own power within a radius of 1,000 miles.

The accounting work of the Manufacturing Department is confined to records and reports covering payrolls, purchased goods, and costs. Daily, weekly, and monthly reports are prepared for the executives, containing information they need for intelligent management. These reports show the weak spots and the strong ones. Unduly high expenditures, costs, or irregularities in any department are immediately disclosed. Benefits of economies are shown, and costs are followed. Comparisons are made with previous periods and figures. Without them, indeed, it would be impossible to manage intelligently the vast business of the corporation.





STUDEBAKER MANUFACTURING CLUB ANNUAL BANQUET, HOTEL STATLER, DETROIT



This department is expected to do seemingly impossible things, and frequently it does them.

The outstanding figure in the Herculean tasks involved in the re-creation and expansion of Studebaker plants to their present mammoth size and high standards is a comparatively young man of long experience, indefatigable energy, great ability, and unquestioned loyalty—Max F. Wollering, who was made Vice President in charge of manufacturing on June 7, 1917, as well as a director, and a member of the finance committee. Mr. Wollering was born at Watertown, Wisconsin, in 1879. At the age of fifteen, he was operating a drill press at 50c per day. Two years later he entered an apprenticeship course for toolmaking. The wages were nothing for the first six months, 25c per day for the next six months, 50c per day for the second year, 75c for the third year, and \$1.00 for the fourth year. By working nights and Sundays he cut nine months off his term and finished the course. He was employed by the Allis-Chalmers Company at Milwaukee at \$2.50 per day, when the International Harvester Company, where he had served his apprenticeship, realizing they had lost a decided asset, brought him back and made him superintendent of their tool room, experimental department, and drafting department, at a salary of \$85 per month. Two years later he joined the Ferro Machine Company at Cleveland as factory superintendent, and in 1906, Henry Ford employed him as superintendent of his motor manufacturing plant. After two years with the Ford Motor Company, where he was

superintendent of the motor building plant, he was made production manager of The Studebaker Corporation. In the author's opinion, he is one of the ablest manufacturers in America.

Charles L. Bockus, General Production Manager, and Richard E. Baus, Assistant Production Manager, have been Mr. Wollering's chief lieutenants through all this work and development, as have, also, tried and true, Production Managers Christian Pretz, Bert H. Warner, William W. Austin, Edward B. Mackie; Assistant Production Managers, Superintendents, and Managers M. R. Kavanagh, H. F. Sheldon, H. V. Kimble, J. J. Armour, F. A. Brenner, J. W. Hines, Al Johnson, J. A. Ford, J. E. Spencer, C. C. Wilcox, Sydney Smith, Louis Zilke, N. B. Peterson, W. J. Learmonth, E. R. Stoddard, Fred'k Kay, G. H. Lepper, A. J. Chanter, R. E. Scratch, and F. J. Bickelhaupt; Chief Inspectors C. E. Floody and Paul Abbott, and many others have contributed in large measure to the success of this department. Guy P. Henry, Chief Engineer, Vincent Link and E. J. Miles, Consulting Engineers, with J. H. Bourgon, Chief Body Engineer, and William P. Woodside, Manager of the Methods and Standards Department, with Mr. Wollering's constant advice and supervision, have been responsible for the design of the products and the methods under which they are made. These men all played vitally important parts in the achievements of the corporation.





H. A. BIGGS



G. E. WILLIS



H. S. VANCE





## Chapter 12

### *The Sales Department*



**T**HE Sales Department is charged with the responsibility of selling the products of the corporation. The organization through which this is accomplished comprises:

Headquarters at South Bend.

Branch offices in all important centers in the United States and in several foreign countries; and district managers in other foreign commercial centers.

Dealers in all cities and towns in the world where automobiles are sold.

At headquarters in South Bend, maps of the entire world, divided into branch and district territories, show tacks where dealers are located. Records and reports show names of dealers, full details of their business, including financial resources, and sales of Studebaker cars, sales of competing cars, possibilities of the market, etc. Records of stocks of cars on hand and new shipments to dealers are kept up to date. Dealers report cars sold, and records of car owners are



A. D. LASKER



W. E. BETTS



G. W. SWEET



H. S. WELCH

compiled therefrom. Records of car registrations by states, counties, and cities, for all makes of cars, are kept, showing absorptive capacity and status of competition. Telegraphic and mail reports are received daily, weekly, and monthly from dealers. Intensive work in sales development is carried to the furthest possible degree. Advertisements written by the advertising agency, and advertising contracts for national and local use, are handled through this department. Catalogs, folders, and printed matter of various kinds are supplied dealers and the public liberally. Officials from headquarters hold frequent dealers' meetings in the field and visit dealers personally.

Foreign sales are handled and followed up on the same general lines as those in the United States, through district managers, traveling salesmen, and service supervisors.

At branch offices, duplicate maps and records are kept for individual territories. Branch managers are in direct charge of the dealers' organization in their respective territories, and are the intermediaries through which headquarters works. Traveling salesmen visit dealers monthly and make daily reports covering conditions at each point, one for the branch office and one for headquarters. Service supervisors, in charge of mechanical matters and troubles, visit dealers monthly and make daily reports in triplicate, one for the branch office, one for headquarters, and the other for the manufacturing department. It is the duty of the branch manager to see that the corporation has a dealer



SERVICE SUPERVISORS' CONVENTION AT SOUTH BEND





in every city and town in his territory where automobiles are sold, and that this dealer is the best dealer in the town, if possible, or the next best, if not. He must first of all be a man of good character and reputation in his community. He must have business experience, ability, and adequate financial resources, and he must be industrious. He must work faithfully to maintain Studebaker's position and reputation in his community. Broadly speaking, a branch manager is expected to see that the corporation gets its share of business out of every town in his territory, that the dealers give proper service to their customers, and that owners of Studebaker cars are fully satisfied. His traveling salesmen and service supervisors just mentioned are used for this purpose, and he also spends most of his time in the territory. Branch offices carry reserve stocks of repair parts for quick shipment to dealers, in addition to the large stock carried at Plant No. 5 in Detroit. Over \$4,000,000 worth of repair parts are kept in stock constantly by the corporation and its dealers.

It is the custom in the automobile industry for manufacturers to make annual contracts with dealers, and the corporation follows this practice. These contracts define the dealer's territory, discounts, and other conditions under which business is transacted. Dealers carry adequate stocks of new cars and repair parts for quick service to customers. It is their duty to seek business aggressively, serve customers faithfully, and enhance the Studebaker reputation in their community by every means in their power. The



STUDEBAKER DEALERS' BANQUET, CHICAGO AUTOMOBILE SHOW, 1924





STUDEBAKER DEALERS' BANQUET, NEW YORK AUTOMOBILE SHOW, 1924



MONTREAL, CANADA



BARCELONA, SPAIN



RIO DE JANEIRO, BRAZIL, BRANCH HOUSE



corporation recognizes its responsibility, both legal and moral, to its dealers, and co-operates with them in a broad way to promote their success and prosperity. It is a matter of record that the corporation was the leader in correcting certain inequities in the terms of dealers' contracts originally used in the industry. It is well known that manufacturers set and advertise retail prices for their cars, which are sold to dealers at such prices minus trade discounts. Prior to 1915, manufacturers would reduce prices, advertise reductions nationally, and not rebate their dealers the amount of reduction for cars they had on hand or in transit to them. The manufacturer's advertising compelled the dealers to sell at the lower retail prices, and thereby suffer the loss of the reduction. The corporation believed this was an injustice, and accordingly, in July, 1915, it inserted a price guaranty clause in its dealers' contracts. Similar guaranties are now commonly used. Prior to 1918, manufacturers required dealers at the beginning of each year when they signed their contracts to sign shipping schedules or orders for their entire year's requirements, by months and by models of cars. These schedules were considered uncancelable orders, and manufacturers shipped against them accordingly. Believing that no manufacturer should or can force goods on a dealer beyond his financial capacity to pay or ability to sell, and that such "orders" were manifestly worthless, the corporation in January, 1918, adopted the monthly car purchase order plan, under which dealers furnish such orders on the fifteenth of each



FRENCH MOTOR CAR COMPANY, LTD., CALCUTTA, INDIA



FRENCH MOTOR CAR COMPANY, LTD., BOMBAY, INDIA



SHOWROOM OF SHANGHAI HORSE BAZAAR & MOTOR CO., LTD., SHANGHAI, CHINA  
THREE FAR EAST DEALERS' ESTABLISHMENTS

month for their requirements of the following month. This plan has been adopted by some other manufacturers, but a number still use the old yearly schedule. All dealers' contracts contain cancelation clauses to protect manufacturers against the death, financial failure, incompetence, or disloyalty on the part of a dealer, and this right is necessary because the franchise possessed by the dealer, namely, the exclusive right to sell cars in a given town, is accepted by him with certain responsibilities and duties, failing in which he forfeits the right to continue, and besides, the manufacturer's business is either neglected or stopped entirely, its reputation is damaged, and the appointment of a new dealer is the only possible salvation. The good will of a manufacturer belongs to him and not to the dealer, and he must protect it. Realizing, however, the hardship resulting to the dealer upon sudden cancelation by the manufacturer in liquidating his stock of cars and parts, the corporation again led the way in January, 1923, by inserting in its contracts a clause which compels it to repurchase all new cars and parts the dealer may have on hand at the time of cancelation of his contract. This enables the dealer to liquidate everything but his receivables and second-hand car stocks and to take on a new line of cars if he is so disposed and continue in business without loss of personal good will. It enables the corporation to appoint a new dealer immediately and not suffer injury in the community. This plan has not yet been adopted by other manufacturers, with but few exceptions.





ANDERS SKOG,  
GOTHENBURG,  
SWEDEN



ADAMS, LTD.,  
CHRISTCHURCH,  
NEW ZEALAND



B. J. PENNEY, LTD.,  
JOHANNESBURG,  
SOUTH AFRICA



The corporation has over 5,000 active dealers in the United States and in all foreign countries where automobiles are sold, and it frankly acknowledges its great obligation to them for the vital part they have played in the development of its business. It is indeed regrettable that pictures of all of them and their establishments cannot be shown in this history. Our domestic dealers will appreciate the dilemma of the author and approve the showing of a few of the establishments in foreign countries. Branch Offices of the corporation are maintained in the following cities: Boston, New York, Philadelphia, Detroit, Atlanta, Buffalo, Cleveland, Cincinnati, Memphis, St. Louis, Dallas, Kansas City, Omaha, Chicago, Minneapolis, Portland, Los Angeles, Indianapolis, South Bend, Rio de Janeiro, and Buenos Aires, with District Offices in various foreign cities.

While it is the policy of the corporation to market its products at wholesale through dealers, it nevertheless maintains retail stores at South Bend, Detroit, New York, Cleveland, Rio de Janeiro, and Buenos Aires, in charge of retail managers. These stores serve a double purpose. They permit the corporation to maintain ideal retail stores and service stations as examples to its dealers, and by contact with customers permit it to understand their attitude towards its product.

The advertising agency which prepares and places the advertisements of the corporation is Lord & Thomas, Chicago, which is one of the oldest and largest concerns

in the business. The vigorous, resourceful, and able man who owns this agency and gives the corporation's business his personal attention is Albert D. Lasker, of national prominence and of considerable previous experience in the automobile business.

The maximum task of any Sales Department can only be to sell the capacity production of the plants. No Sales Department can do more. The Sales Department of the corporation, headed by H. A. Biggs, Vice President, H. S. Vance, Sales Manager, G. W. Sweet, Assistant Sales Manager, Geo. E. Willis, Foreign Sales Manager, H. S. Welch, Assistant Foreign Sales Manager, W. E. Betts, Advertising Manager, and T. K. McCune, National Service Manager, and their chief assistants, including all branch managers, has accomplished this maximum task for the past five years, and the plants have operated at capacity, as shown by the following table:

In 1923, 145,167 cars were sold, an increase of 32% over 1922.  
In 1922, 110,269 cars were sold, an increase of 65% over 1921.  
In 1921, 66,643 cars were sold, an increase of 29% over 1920.  
In 1920, 51,474 cars were sold, an increase of 31% over 1919.  
In 1919, 39,356 cars were sold.

A striking fact in the growth of Studebaker business is furnished by the statement that the value of Studebaker automobiles sold in the calendar year of 1923 exceeded the value of all Studebaker horse-drawn vehicles and harness sold in the sixty-eight years during which they were made by the corporation and antecedent concerns.

Mr. Biggs was engaged as Sales Manager in 1917 and was promoted to Vice President on January 1, 1919. He is a man of broad vision, good judgment, fine executive ability, and an indefatigable worker. As a member of the Frank Seaman Advertising Agency he handled the advertising account of the corporation for five years prior to becoming its sales manager. Mr. Vance rose successively from a mechanic in the factory to head of the Specification Department, Purchasing Agent, Assistant to the President, Foreign Sales Manager, and to Sales Manager, in a period of twelve years. Mr. Willis was the successful manager of the Berlin branch when war was declared in 1914, and afterward made a brilliant record as manager of the Cleveland branch.

The great field forces of branch managers who contribute so much to the success of this department are C. S. Connor, W. K. Erdman, L. B. Evans, F. R. French, I. C. Jones, C. L. Mason, A. W. Maxwell, M. S. Mentzer, K. A. Metzertott, W. G. Northrup, C. T. O'Donnell, F. L. Oilar, F. D. Phillips, H. M. Russell, J. A. Snoddy, D. J. Willoughby, H. A. White, A. M. Wilmot, E. J. Murnane, O. A. Scherman, T. L. Snowhook, and S. B. Cochrane in the United States, and J. R. Collins, M. F. Davies, A. W. L. Ellis, H. Goodwin, R. A. Hutchinson, E. B. McKinney, A. Mosquera, Simeon Shepard, A. F. Waddel, E. H. Watson, J. K. Wauters, and D. R. Yantis in foreign countries.



N. R. FELTES



H. E. DALTON





## Chapter 13

### *Financial and Accounting Departments*



THE Financial Department is charged with the responsibility of carrying out the financial policies of the corporation and of properly protecting and accounting for its money and property. The Accounting Department is under its control, subject to the right and duty of the General Auditor in charge thereof to report to the President and directors upon all audits, balance sheet, profit and loss, and other accounting matters.

Under the by-laws, the directors approve the depository banks of the corporation in which all collections, wherever made, are deposited intact. Daily reports of cash receipts, with signed deposit slips attached, are mailed to the Treasurer daily by all branches and other collecting agencies. Checks against deposits must be signed and countersigned by different officers. All disbursing agents, such as cashiers, traveling men, and others, are furnished working funds in round sums commensurate with their requirements, and semi-monthly reports of disbursements are for-



A. G. RUMPF



W. P. SHILLINGTON



GEORGE A. FULMER



J. C. BAYLESS

warded to the Treasurer, who upon proper approval of said disbursements remits for the exact amount thereof, and thereby restores the working fund of the disbursing agent.

Unless the Finance Committee otherwise provides by a general or special resolution, all contracts on behalf of the corporation are submitted to it for approval. All disbursements of extraordinary nature, such as plant expansion, betterments, contracts, leases, royalties, etc., are made upon documents authorized by the Finance Committee. Copies of all contracts, leases, and agreements entered into by the corporation are kept on file in the Financial Department, which also has custody of all securities owned or held for the account of others by the corporation.

The Credit Department, which handles all matters pertaining to the granting of credits and the collection of accounts, is under the Treasurer. So is the Insurance Department, which is responsible for the placing of insurance on all property of the corporation, the obtaining of surety bonds, and other kinds of insurance.

Assistant Treasurers and Cashiers at the home office and branches report either to the Treasurer or General Auditor.

The Treasurer is required to make daily reports of cash receipts, disbursements, and bank balances, and quarterly balance sheets and profit and loss statements, to the President and members of the board.

The General Auditor of the corporation is in direct charge of the Accounting Department, which keeps numerous records and makes reports therefrom to divers officers



J. M. PETERSON



E. H. HEED



R. E. REIDENBACH



A. F. FUERTH



and executives, both senior and junior, from which they sense what is going on in the different plants and offices and in each department thereof. These reports are the compasses by which they sail the ship, and without which intelligent and successful steering would be impossible. Daily, weekly, and monthly, these production, labor, inventory, expense, cost, sales, advertising, betterment, financial, and other reports, showing amounts, percentages, and comparative figures of previous periods, come to the hands of management. The number of employees and their activities in the plants and offices located throughout the world, are so vast that no man can carry them in his mind or know definitely what is going on without methodical, correct, and prompt reports to guide him. An efficient accounting department is absolutely essential to the successful management of big business. It is likewise essential that executives possess sufficient knowledge of accounting to enable them to grasp the meaning of reports. When reports show progress is being made, or that results accomplished in a given department are satisfactory, they assure management that all is well. When they show the reverse, however, and things are going the wrong way, management cannot too quickly apply a remedy. Reports tell management when the business is sick, *before it dies*, and management is expected to restore health. This metaphor expresses the value of an efficient accounting department in one sentence. Its function of keeping management informed of operation is certainly as important as its other func-

tion of drawing off balance sheets and profit and loss statements for directors and stockholders, because the results these show will be much better if the first function is well performed, and greater talent is required to perform it. A good bookkeeper can draw off balance sheets and profit and loss statements, but high-powered executive accountants, possessing abnormal curiosity, resourcefulness, determination, and tact to get the facts and disclose them to management quickly, are hard men to find.

The manufacturing accounting system of the corporation provides for running book inventories of productive labor, raw material, work in progress, finished cars, and overhead expenses. Stock cards of raw material and finished cars are kept up to date, and verified by continuous count and audit. Physical inventories of work in progress are taken quarterly. Costs are made up monthly. Profit and loss statements and general balance sheets are made up quarterly.

N. R. Feltes, Treasurer, and H. E. Dalton, General Auditor, are the wheel horses of these Departments. Both are men of wide experience, fine character, and unusual ability. Mr. Feltes won his spurs in positions of Treasurer and General Manager of two big concerns before becoming Treasurer of the corporation in 1918. Mr. Dalton grew up with the corporation. He began in 1910 as a bookkeeper at Detroit, and was promoted successively to the positions of Manager of Branch Accounting, Chief Clerk of the Accounting Department, and General Auditor, in 1913. He is one of the most popular officials in the organization.

W. P. Shillington, Assistant Treasurer at Detroit, in charge of both treasury and accounting work, is an exceptionally efficient man. A. G. Rumpf, Secretary and Assistant Treasurer, is not only Secretary of the Board, but has charge of the Credit and Insurance Departments and other important matters. J. M. Peterson, G. A. Fulmer, A. F. Fuerth, R. E. Reidenbach, F. N. La Pierre, H. T. Waite, F. C. Kenney, and J. C. Bayless, veterans all, contribute loyal and efficient service to the work of these departments. E. H. Heed, Assistant General Auditor, rose to his present position by promotion on merit.



J. F. COTTER



G. M. SHERMAN





## Chapter 14

### *Law and Traffic Departments*



THE Law Department is in charge of all legal matters. It is the policy and desire of the corporation to settle all controversies in which it becomes involved on a just and equitable basis to all parties concerned. Resort to the courts is never willingly sought by the corporation as the plaintiff, and compromise settlement out of court is preferred for the adjustment of any reasonable claims against it. The work of the Law Department, therefore, is largely confined to corporation matters such as the drawing of contracts, leases, patent applications, and the making of reports and tax returns to the different state and Federal Governments; also the giving of legal advice and assistance whenever wanted by the organization and dealers of the corporation. It is a quiet department, studiously attending to its business, and is not very big in numbers. An extensive law library is provided for its use.

John F. Cotter, General Attorney in charge of the Law Department, is a graduate of the University of Michigan,



P. W. POMEROY



E. W. STRICKLAND



W. R. SHORT



G. E. WELCH

and has been with the corporation since 1911, during which time he has performed loyal and efficient service. E. W. Strickland, attorney, a graduate of Valparaiso University, and P. W. Pomeroy, patent attorney, are Mr. Cotter's chief assistants.

Frederick P. Delafield, a member of Hawkins, Delafield and Longfellow, New York, a director and a member of the executive committee, is special counsel of the corporation, to whom all important matters are referred. Mr. Delafield was special counsel of the Studebaker Brothers Manufacturing Company before the organization of the corporation and assisted in the formation of it. He is a prominent member of the New York Bar Association and a distinguished lawyer.

The Traffic Department is responsible for all transportation matters. It arranges routes, obtains freight cars and rates, and handles details of all outbound and inbound shipments. It handles bills of lading and manifests, checks and approves freight bills for payment, and collects claims against carriers for overcharges, errors, shortages and damages. It has charge of all shipments by express and by steamship.

This department is expected to prevent delays in transit of car manufacturing materials en route to plants. Whenever necessary its representatives are expected to ride trains to prevent freight cars from being side-tracked, or bring in rush materials by trucks or in trunks as baggage. In great emergencies of freight congestion or stormy weather its ability and usefulness are fully emphasized.

George M. Sherman, Traffic Manager, has been with the corporation thirty-seven years, and is a real veteran. He began as a boy and worked himself up rapidly to his present position which he has held for twenty-three years. W. R. Short, Assistant Traffic Manager, at Detroit, and G. E. Welch, Assistant Traffic Manager, at South Bend, his two chief lieutenants, bear much of the brunt of the work of this department and share credit, with their chief, for its accomplishments.





## ADDENDA

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# CAPITAL STOCK AND TANGIBLE ASSETS

Dec. 31st	CAPITAL STOCK OUTSTANDING			NET TANGIBLE ASSETS		
	7% Cumulative Preferred	Common	Total	Amount	Percent Capital Stock	Book Value Com. Stock Per Share
1911	\$13,500,000	\$27,931,600	\$41,431,600	\$22,597,455.40	54.5	\$ 32.57
1912	13,095,000	27,931,600	41,026,600	23,574,875.54	57.5	37.52
1913	12,650,000	27,931,600	40,581,600	23,752,315.48	58.5	39.75
1914	12,180,000	27,931,600	40,111,600	26,829,190.35	66.9	52.45
1915	10,965,000	30,000,000	40,965,000	33,677,329.89	82.2	75.71
1916	10,965,000	30,000,000	40,965,000	38,379,262.07	93.7	91.38
1917	10,965,000	30,000,000	40,965,000	39,012,452.99	95.2	93.49
1918	10,775,000	30,000,000	40,775,000	40,739,097.50	99.9	99.88
1919	10,260,000	45,000,000	55,260,000	59,618,306.83	107.9	109.68
1920	9,800,000	60,000,000	69,800,000	63,459,771.18	90.9	89.43
1921	9,800,000	60,000,000	69,800,000	68,272,467.10	97.8	97.45
1922	9,450,000	75,000,000	84,450,000	79,334,912.87	93.9	93.18
1923	8,600,000	75,000,000	83,600,000	88,326,457.19	105.7	106.30
Avg.	\$11,000,385	\$42,055,877	\$53,056,262	\$46,736,453.41	88.1	\$ 84.97

# ACTUAL NET ASSETS

Dec. 31st	WORKING CAPITAL			Plant and Property Including Housing Development	Total Net Tangible Assets
	Quick Assets	All Liabilities	Net		
1911	\$24,302,986.23	\$12,003,011.36	\$12,299,974.87	\$10,297,480.53	\$22,597,455.40
1912	24,054,953.24	11,069,728.43	12,985,224.81	10,589,650.73	23,574,875.54
1913	25,947,202.29	14,062,848.31	11,884,353.98	11,867,961.50	23,752,315.48
1914	24,665,019.65	9,893,869.33	14,771,150.32	12,058,040.03	26,829,190.35
1915	29,288,846.82	8,012,010.22	21,276,836.60	12,400,493.29	33,677,329.89
1916	35,480,290.24	10,539,011.28	24,941,278.96	13,437,983.11	38,379,262.07
1917	34,382,544.36	10,847,277.78	23,535,266.58	15,477,186.41	39,012,452.99
1918	36,944,570.72	14,127,549.43	22,817,021.29	17,922,076.21	40,739,097.50
1919	42,601,248.17	8,689,795.41	33,911,452.76	25,706,854.07	59,618,306.83
1920	41,367,497.50	16,337,163.66	25,030,333.84	38,429,437.34	63,459,771.18
1921	38,974,732.44	10,248,394.76	28,726,337.68	39,546,129.42	68,272,467.10
1922	49,837,402.52	15,488,599.46	34,348,803.06	44,986,109.81	79,334,912.87
1923	48,620,535.04	14,290,546.40	34,329,988.64	53,996,468.55	88,326,457.19

# SALES, INTEREST, INCOME TAXES AND NET PROFITS

Year	No. Cars Sold	Total Net Sales	Net Earnings (After Depreciation)	LESS		NET PROFITS AFTER ALL DEDUCTIONS		
				Interest	U. S. and Canadian Gov't Income and Excess Profits Taxes	Amount	Percent Sales	Percent Com. Stock
1911	22,555	\$ 28,487,847.29	\$ 2,153,555.53	\$ 483,980.62	\$ 15,992.87	\$ 1,653,582.04	5.8	3.4
1912	28,523	35,440,327.41	2,780,927.00	444,527.33	23,154.53	2,313,245.14	6.5	4.9
1913	35,410	41,464,949.82	2,275,244.11	484,948.78	17,821.68	1,772,473.65	4.3	3.1
1914	35,460	43,444,223.41	4,901,799.01	414,940.44	44,892.41	4,441,966.16	10.2	12.8
1915	46,845	56,539,006.23	9,201,548.96	49,187.16	84,936.52	9,067,425.28	16.0	27.5
1916	65,885	61,988,594.09	8,704,680.67	*90,518.50	183,954.09	8,611,245.08	13.9	26.1
1917	42,357	50,147,515.75	4,359,417.02	298,488.23	560,187.87	3,500,740.92	7.0	9.1†
1918	23,864	52,087,997.00	4,817,612.74	295,664.26	637,753.97	3,884,194.51	7.5	10.4†
1919	39,356	66,383,307.34	11,283,463.05	116,950.02	1,854,229.15	9,312,283.88	14.0	28.5
1920	51,474	90,652,362.56	12,130,807.24	*120,014.31	2,428,767.51	9,822,054.04	10.8	15.2
1921	66,643	96,690,643.83	12,532,296.69	*138,148.82	2,260,754.71	10,409,690.80	10.8	16.2
1922	110,269	133,178,881.00	20,043,956.98	*615,135.47	2,572,896.68	18,086,195.77	13.6	29.0
1923	145,167	166,153,683.28	20,307,804.77	*606,936.18	2,572,518.00	18,342,222.95	11.0	23.6
Total	713,808	\$922,659,339.01	\$115,493,113.77	\$1,017,933.56	\$13,257,859.99	\$101,217,320.22	11.0	16.7 (Avg.)

\*Credit

†U. S. at War

## NET PROFITS, DIVIDENDS AND SURPLUS

Year	Net Profits	DISPOSITION				
		7% Preferred Dividends	Common Dividends		Extraordinary Charge-offs and Surplus Adjustments	Balance Retained in the Business for Development and Working Capital
			Percent	Amount		
1911	\$ 1,653,582.04	\$ 708,750	...	.....	.....	\$ 944,832.04
1912	2,313,245.14	930,825	...	.....	.....	1,382,420.14
1913	1,772,473.65	901,075	...	.....	\$ 275,000.00	596,398.65
1914	4,441,966.16	869,050	...	.....	.....	3,572,916.16
1915	9,067,425.28	830,445	†5.0	\$ 1,396,580	817,360.74	6,023,039.54
1916	8,611,245.08	767,550	10.0	3,000,000	141,762.90	4,701,932.18
1917	†3,500,740.92	767,550	\$7.0	2,100,000	.....	633,190.92
1918	†3,884,194.51	767,550	4.0	1,200,000	.....	1,916,644.51
1919	9,312,283.88	748,475	7.0	2,100,000	2,069,599.55	4,394,209.33
1920	9,822,054.04	710,150	7.0	3,937,500	872,939.69	4,301,464.35
1921	10,409,690.80	686,000	7.0	4,200,000	710,994.88	4,812,695.92
1922	18,086,195.77	673,750	10.0	6,000,000	.....	11,412,445.77
1923	18,342,222.95	638,750	10.0	7,500,000	361,928.63	9,841,544.32
Total	\$101,217,320.22	\$9,999,920	67.0	\$31,434,080	\$5,249,586.39	\$54,533,733.83
%	100%	9.9%	....	31.0%	5.2%	53.9%

†U. S. at War

†Placed on 5% basis June 1st, and 6% Dec. 1st with 1% extra paid

§Reduced rate to 4% Sept. 1st.



# PLANT AND PROPERTY ACCOUNTS

Year	Plant and Property Jan. 1st	Gross Expenditures for Additions and Betterments	Plant and Property Sold and/or Demolished; less Reserve for Depreciation on same	Depreciation (Charged to Operating Expenses)	PLANT AND PROPERTY DECEMBER 31ST		
					Amount	Percent Sales	Percent Net Profit
1911	\$ 9,811,990.34	\$ 734,985.89	\$ 14,079.55	\$ 235,416.15	\$10,297,480.53	36.1	622.7
1912	10,297,480.53	853,247.87	335,900.25	225,177.42	10,589,650.73	29.9	457.8
1913	10,589,650.73	1,518,676.61	1,707.31	238,658.53	11,867,961.50	28.6	669.6
1914	11,867,961.50	570,749.41	18,876.87	361,794.01	12,058,040.03	27.8	271.5
1915	12,058,040.03	752,707.03	12,262.76	397,991.01	12,400,493.29	21.9	136.8
1916	12,400,493.29	1,646,571.11	173,611.24	435,470.05	13,437,983.11	21.7	156.1
1917	13,437,983.11	2,522,422.06	52,873.20	430,345.56	15,477,186.41	30.9	442.1
1918	15,477,186.41	2,847,823.83	10,633.31	392,300.72	17,922,076.21	34.4	461.4
1919	17,922,076.21	8,328,611.57	44,996.73	498,836.98	25,706,854.07	38.7	276.1
1920	25,706,854.07	11,166,990.86	6,159.79	705,080.53	36,162,604.61	39.9	368.2
1921	36,162,604.61	1,840,127.84	7,212.49	705,106.32	37,290,413.64	38.6	338.2
1922	37,290,413.64	7,375,836.00	215,326.17	1,024,741.48	43,426,181.99	32.6	240.1
1923	43,426,181.99	10,696,413.05	508,913.63	1,141,045.00	52,472,636.41	31.6	286.1
Total	✓	\$50,855,163.13	\$1,402,553.30	\$6,791,963.76	✓	✓	✓

## SUNDRY TABLES

Jan. 1st	WORKING CAPITAL		INVENTORY		REPAIRS AND RENEWALS TO PLANT AND PROPERTY CHARGED OFF TO OPERATING EXPENSES		
	Amount	Percent Sales	Amount	Percent Sales	Year	Amount	Percent P. & P. Investment Jan. 1st
1911	\$13,880,733.02	48.7	\$14,643,419.92	51.4	1911	Est. \$ 500,000.00	5.1
1912	12,299,974.87	34.7	14,391,250.99	40.6	1912	717,688.00	7.0
1913	12,985,224.81	31.3	15,730,840.85	37.9	1913	1,097,453.00	10.4
1914	11,884,353.98	27.4	16,622,228.55	38.3	1914	817,151.00	6.9
1915	14,771,150.32	26.1	13,470,564.49	23.8	1915	1,244,207.00	10.3
1916	21,276,836.60	34.3	13,062,041.44	21.1	1916	1,989,545.00	16.0
1917	24,941,278.96	49.7	21,477,657.30	42.8	1917	1,408,230.00	10.5
1918	23,535,266.58	45.2	21,322,134.35	40.9	1918	2,326,871.00	15.0
1919	22,817,021.29	34.4	17,555,796.85	26.4	1919	2,994,381.00	16.7
1920	33,911,452.76	37.4	20,607,337.44	22.7	1920	4,285,281.00	16.7
1921	25,030,333.84	25.9	28,076,792.98	29.0	1921	3,124,480.00	8.6
1922	28,726,337.68	21.6	22,209,885.26	16.7	1922	4,144,913.00	11.1
1923	34,348,803.06	20.7	21,514,248.93	12.9	1923	5,476,079.00	12.6
Avg.	\$21,569,905.21	30.4	\$18,514,169.18	26.1	Total	\$30,126,279.00	11.7 (Avg.)

# CONSOLIDATED PROFIT AND LOSS AND SURPLUS ACCOUNT

FOR THE YEAR ENDED DECEMBER 31, 1923

*(Compared with the year ended December 31, 1922)*

	1923	1922	INCREASE *DECREASE
CAR STATISTICS:			
Number of cars produced .....	150,192	109,222	40,970
Number of cars sold .....	145,167	110,269	34,898
NET SALES .....	\$166,153,683.28	\$133,178,881.00	\$ 32,974,802.28
Deduct: Cost of manufacturing, including reserve for depreciation, selling and general expense...	145,845,878.51	113,134,924.02	32,710,954.49
Net earnings .....	\$ 20,307,804.77	\$ 20,043,956.98	\$ 263,847.79
Add: Interest received .....	606,936.18	615,135.47	*8,199.29
Net profits before deducting income taxes .....	\$ 20,914,740.95	\$ 20,659,092.45	\$ 255,648.50
Deduct: Income taxes in United States and Canada	2,572,518.00	2,572,896.68	*378.68
NET PROFITS FOR THE YEAR .....	\$ 18,342,222.95	\$ 18,086,195.77	\$ 256,027.18
Deduct: Dividends paid			
Preferred stock 7% .....	638,750.00	673,750.00	*35,000.00
Common stock 10% .....	7,500,000.00	6,000,000.00	1,500,000.00
Total .....	\$ 8,138,750.00	\$ 6,673,750.00	\$ 1,465,000.00
Balance, transferred to surplus account .....	\$ 10,203,472.95	\$ 11,412,445.77	\$ *1,208,972.82
Surplus January 1st .....	10,237,189.51	14,229,743.74	*3,992,554.23
	\$ 20,440,662.46	\$ 25,642,189.51	\$ *5,201,527.05
Deduct: Transfer to special surplus account .....	405,000.00	405,000.00	
Stock dividend .....		15,000,000.00	*15,000,000.00
Loss on buildings demolished .....	361,928.63		361,928.63
Total .....	\$ 766,928.63	\$ 15,405,000.00	\$*14,638,071.37
SURPLUS ACCOUNT, December 31st .....	\$ 19,673,733.83	\$ 10,237,189.51	\$ 9,436,544.32
SPECIAL SURPLUS ACCOUNT, December 31st...	\$ 4,860,000.00	\$ 4,455,000.00	\$ 405,000.00



# CONSOLIDATED BALANCE SHEET

DECEMBER 31, 1923

(Compared with December 31, 1922)

ASSETS	1923	1922	INCREASE *DECREASE
<b>QUICK ASSETS:</b>			
Cash in banks and on hand .....	\$ 9,955,791.46	\$ 15,174,395.91	\$*5,218,604.45
Sight drafts outstanding .....	1,685,947.05	3,509,864.95	*1,823,917.90
Investments, including stock of The Studebaker Corporation held for employees, less reserve...	2,857,217.29	4,017,990.95	*1,160,773.66
Accounts and notes receivable, less reserve for bad debts .....	6,917,225.47	4,859,578.62	2,057,646.85
Inventories of raw materials, work in progress, finished products, stores and supplies at factories and branches .....	26,674,925.39	21,514,248.93	5,160,676.46
Deferred charges to operations, insurance unexpired, prepaid expenses, etc.....	529,428.38	761,323.16	*231,894.78
<b>TOTAL QUICK ASSETS.....</b>	<b>\$ 48,620,535.04</b>	<b>\$ 49,837,402.52</b>	<b>\$*1,216,867.48</b>
<b>CAPITAL INVESTMENTS:</b>			
Plant and property at South Bend, Indiana; Detroit, Michigan; Chicago, Illinois; Walkerville, Ontario, and at branches			
Balance January 1st .....	\$ 48,422,179.26	\$ 41,488,542.51	\$ 6,933,636.75
Additions during the year, less realizations ...	9,995,341.56	6,933,636.75	3,061,704.81
	\$ 58,417,520.82	\$ 48,422,179.26	\$ 9,995,341.56
Less: Total reserve for depreciation .....	5,944,884.41	4,995,997.27	948,887.14
Total plant and properties .....	\$ 52,472,636.41	\$ 43,426,181.99	\$ 9,046,454.42
Capital stock and advances to Citizens' Homes Co., South Bend—housing development for employees .....	1,523,832.14	1,559,927.82	*36,095.68
Trade name, goodwill and patent rights .....	19,807,276.64	19,807,276.64	
<b>TOTAL CAPITAL INVESTMENTS .....</b>	<b>\$ 73,803,745.19</b>	<b>\$ 64,793,386.45</b>	<b>\$ 9,010,358.74</b>
	<b>\$122,424,280.23</b>	<b>\$114,630,788.97</b>	<b>\$ 7,793,491.26</b>



# CONSOLIDATED BALANCE SHEET

DECEMBER 31, 1923

(Compared with December 31, 1922)

LIABILITIES	1923	1922	INCREASE *DECREASE
<b>CURRENT LIABILITIES:</b>			
Accounts payable, current.....	\$ 5,567,418.88	\$ 6,756,635.09	\$*1,189,216.21
Deposits on sales contracts .....	366,074.50	392,454.21	*26,379.71
Sundry creditors and reserves, including accrued payrolls .....	5,772,667.31	5,649,046.04	123,621.27
Reserve for U. S. and Canadian income taxes ...	2,584,385.71	2,690,464.12	*106,078.41
<b>TOTAL CURRENT LIABILITIES .....</b>	<b>\$ 14,290,546.40</b>	<b>\$ 15,488,599.46</b>	<b>\$*1,198,053.06</b>
<b>CAPITAL STOCK:</b>			
7% cumulative preferred stock: Authorized 150,000 shares of \$100 each, \$15,000,000.00			
Whereof issued .....	\$ 13,500,000.00	\$ 13,500,000.00	
Less: Retired under provision of charter .....	4,900,000.00	4,050,000.00	\$ 850,000.00
Outstanding .....	\$ 8,600,000.00	\$ 9,450,000.00	\$ *850,000.00
Common stock: Authorized 750,000 shares of \$100 each, \$75,000,000.00			
Issued and outstanding .....	75,000,000.00	75,000,000.00	
<b>TOTAL CAPITAL STOCK OUTSTANDING .....</b>	<b>\$ 83,600,000.00</b>	<b>\$ 84,450,000.00</b>	<b>\$ *850,000.00</b>
<b>SURPLUS:</b>			
Special surplus account .....	\$ 4,860,000.00	\$ 4,455,000.00	\$ 405,000.00
Surplus account .....	19,673,733.83	10,237,189.51	9,436,544.32
<b>TOTAL SURPLUS .....</b>	<b>\$ 24,533,733.83</b>	<b>\$ 14,692,189.51</b>	<b>\$ 9,841,544.32</b>
	\$122,424,280.23	\$114,630,788.97	\$ 7,793,491.26















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